GPS/GNSS Combination Antenna



GPSK-TET



High performance combination antenna Active GPS/GNSS 30dB gain LNA 2dBi flexible gain whip 380-430MHz TETRA Single hole fixing

The GPSK-TET antenna range is a dual function, high performance TETRA antenna with an active GPS/GNSS module in the base.

The TETRA whip covers 380MHz to 430Mhz, with 2dBi gain.

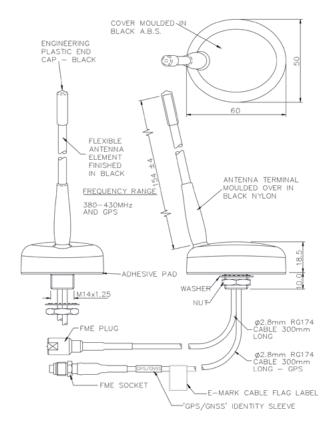
The GPSK base can be installed on a roof up to 6mm thick using only a single 15mm hole. An extender kit is available for thicker roofs.

The dual function of the Panorama GPSK range makes the antenna a popular choice for public safety, transportation and other public service & utility vehicles around the world.

This antenna can be provided with suitable extension coaxial cables as a 'plug & play' kit for all TETRA terminals.

Technical Drawing

GPSK-TET Shown



GPS/GNSS Combination Antenna



GPSK-TET

				Product Data			
Part No.							
			GPSK-TET				
Electrical Data							
Frequency Range ((MHz)		380-430				
Gain: Isotropic	,		2dBi				
Compared to 1/4 wave			0dB				
Polarisation			Vertical				
Pattern		On	nni-directional				
Impedance			50Ω				
Max Input Power (W)			25				
GPS Data							
Frequency Range ((MHz)	,	559 - 1612				
VSWR	,		<2.5:1				
Gain: LNA			30dB				
Polarisation		Righ	t Hand Circular				
Operating Voltage			DC (fed via coax)				
Current			rpical <20mA				
		13	picai \2011A				
Mechanical Data	\\(\alpha\) \(\begin{array}{cccccccccccccccccccccccccccccccccccc		454 (01)				
	Whip Length		154 (6")				
Dimensions (mm)	Base Height	18.5 (0.73")					
	Base Length		60 (2.4")				
O	Base Width		50 (1.96")				
Operating Temp (°C	~)	-40 / +80	0°C (-40° / +176°F)				
Colour			Black				
Mounting Data	,		M 1/45 (0.0%)				
Fixing / Hole Size (mm)		Mount / 15 (0.6")				
Cable Data		GPS/GNSS Cable	Comms Cabl	е			
	Туре		RG174				
Pigtail Cables	Diameter (mm)		2.8 (0.1")				
	Length (m)		0.3 (11.8")				
	Termination	FME socket (f)	FME plug (m)			
		Typical VSWR*		Electrical Data			
	350 360 370 Measured on a 600 x	380 390 400 410 420 430 440 450 x 600mm (2' x 2') groundplane with 5m (16') of CS23 cable.					
		Typical E-Plane (390MHz) Typical H-Plane (390MHz)	Typical E Plane (GPS 1575MHz)				

GPS Combination Antenna





GPSK

Excellent performance
Active GPS element
Single hole fixing

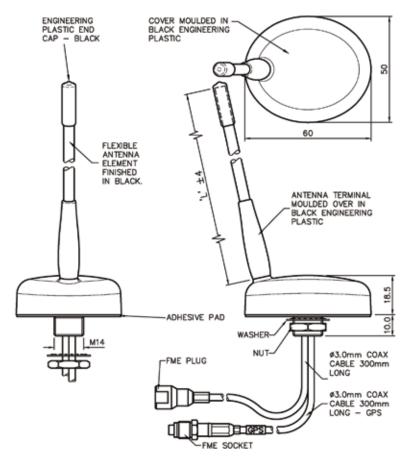
The GPSK antenna range is a dual function, high performance TETRA antenna with an active GPS element.

The GPSK range covers frequencies from 300MHz to 470Mhz, depending on the equipment requirements. With the ability to mount on a roof up to 6mm thick using only a single 15mm hole.

The dual functionality of the Panorama GPSK range makes the antenna a popular choice for police, buses, taxi's and other public service and utility vehicles.

This antenna can be provided as a 'plug & play' kit for all TETRA terminals.

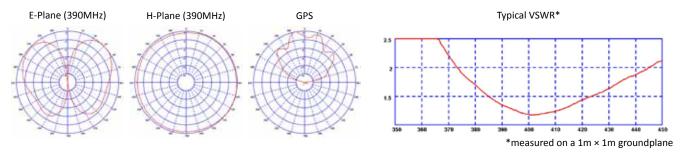
Technical Drawing





GPS ANTENNA





Part No.					
		GPSK-R1-FF	GPSK-R2-FF	GPSK-TET-FF	GPSK-S4-FF
Electrical Data					
Frequency Range (M	IHz)	300-334	350-370	380-430	450-470
Operational Band		R1	R2	TET	S4
Gain: Isotropic		2dBi	2dBi	2dBi	2dBi
Compared to ¼ wave	2	OdB	0dB	OdB	OdB
Polarisation		Vertical	Vertical	Vertical	Vertical
Pattern		Omni-directional	Omni-directional	Omni-directional	Omni-directional
Impedance		50Ω	50Ω	50Ω	50Ω
Max Input Power (W	′)	25	25	25	25
GPS Data					
Frequency Range (M	IHz)	1575	1575	1575	1575
VSWR		<1.5:1 ± 4MHz	<1.5:1 ± 4MHz	<1.5:1 ± 4MHz	<1.5:1 ± 4MHz
Gain: LNA		26dB	26dB	26dB	26dB
Polarisation		Right Hand Circular	Right Hand Circular	Right Hand Circular	Right Hand Circular
Operating Voltage		3 - 7V DC (fed via coax)			
Current		Typical 14mA	Typical 14mA	Typical 14mA	Typical 14mA
Mechanical Data					
	Whip Length	201	179	163	137
Di	Base Height	18.5	18.5	18.5	18.5
Dimensions (mm)	Base Length	60	60	60	60
	Base Width	50	50	50	50
Operating Temp (°C)		-40° / +80°C	-40° / +80°C	-40° / +80°C	-40° / +80°C
Material		Engineering plastic	Engineering plastic	Engineering plastic	Engineering plastic
Colour		Black	Black	Black	Black
Mounting Data					
Fixing		Panel mount	Panel mount	Panel mount	Panel mount
Hole Size (mm)		15	15	15	15
Cable Data					
	Туре	RG174	RG174	RG174	RG174
GPS Cable	Thickness (mm)	2.8	2.8	2.8	2.8
	Length (m)	0.3	0.3	0.3	0.3
	Termination	FME socket	FME socket	FME socket	FME socket
Comms Cable	Туре	RG174	RG174	RG174	RG174
	Thickness (mm)	2.8	2.8	2.8	2.8
	Length (m)	0.3	0.3	0.3	0.3
	Termination	FME plug	FME plug	FME plug	FME plug

High Gain GPS Combination Antenna





GPSK-G

Excellent performance
Active GPS element
Single hole fixing

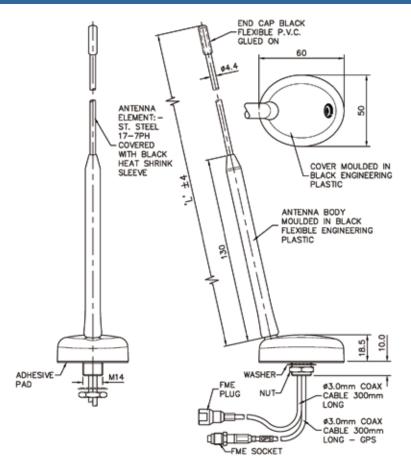
The GPSK antenna range is a dual function, high performance TETRA antenna with an active GPS element.

The GPSK-G range covers frequencies from 380MHz to 470Mhz, depending on the equipment requirements. With the ability to mount on a roof up to 6mm thick using only a single 14mm hole.

The dual functionality of the Panorama GPSK range makes the antenna a popular choice for police, buses, taxi's and other public service and utility vehicles.

This antenna can be provided as a 'plug & play' kit for all TETRA terminals.

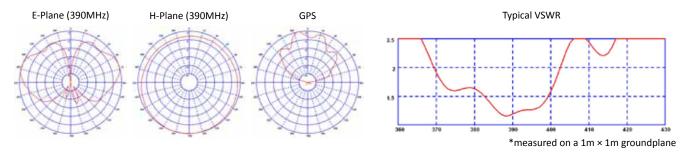
Technical Drawing





GPS ANTENNA





Frequency Range (MHz) 380-400 410-430 450-470 Operational Band S1 S2 54 Gain: stortopic 5dBi 5dBi 3dB Compared to X wave 3dB 3dB 3dB Polarisation Vertical Vertical Vertical Pattern Omni-directional Omni-directional Omni-directional Impedance 500 500 500 Max Input Power (W) 25 25 25 CFS 5tat Frequency Range (MHz) 1575 1575 1575 VSWR <1.51.1 4MHz <1.51.1 4MHz <1.51.1 4MHz Sight Hand Circular Right Hand Circular Right Hand Circular Right Hand Circular Operating Voltage 3 - 70 CC (fed via coax) 3 - 70 CC (fed via	Part No.				
Frequency Range (MHz) 380-400 410-430 450-470 Operational Band S1 52 54 Gain: stortopic 5681 5081 5681 Compared to X wave 3dB 3dB 3dB Polarisation Vertical Vertical Vertical Pattern Omni-directional Omni-directional Omni-directional Impedance 500 500 500 Max Input Power(∀) 6302 50 50 Max Input Power(∀) 1575 1575 1575 VSWR 1575 1575 1575 VSWR <1.51.1 4MHz			GPSK-S1G-FF	GPSK-S2G-FF	GPSK-S4G-FF
Operational Band 51 52 54 Gain: Isotropic 568i 5dBi 5dBi 3dB Compared to X ways 3dB 3dB 3dB Polarisation Vertical Vertical Vertical Pattern Ome-directional Omn-directional Omn-directional Impedance 500 500 500 Max input Power (w) 25 25 25 Prequency Range (MP) 1575 1575 1575 1575 1575 25 26B 26dB <	Electrical Data				
Gain: Isotropic 5dBi 5dBi 3dB 3dB Compared to N wave- Polarization Yertical Vertical Vertical Omnidirectional So Omnidirectional So Omnidirectional So So So Omnidirectional So	Frequency Range (M	1Hz)	380-400	410-430	450-470
Compared to X wave Polarisation 3dB 3dB 3dB Polarisation Vertical Vertical Vertical Pattern Omni-directional Omni-directional Omni-directional Impedance 500 500 500 Max Input Power (W) 25 25 25 Requency Range (MHz) 1575 1575 1575 Right Hand Circular	Operational Band		S1	S2	S 4
Polarisation Vertical Vertical Vertical Vertical Omni-directional Omni-directional Pattern 50Ω	Gain: Isotropic		5dBi	5dBi	5dBi
Pattern Omni-directional Omni-directional Omni-directional Impedance 50Ω 50Ω 50Ω Max Input Power (W) 25 25 25 GFS Descriptions of the property of th	Compared to ¼ wav	e	3dB	3dB	3dB
Impedance 50Ω 50Ω 50Ω Ama input Power (W) 25 25 25 Frequency Range (MHz) 1575 1575 1575 Frequency Range (MHz) 1575 1575 1575 VSWR < 1.5:1± 4MHz	Polarisation		Vertical	Vertical	Vertical
Max Input Power (W) 25 25 25 GPS Data Frequency Range (MHz) 1575 1525 1525 1525	Pattern		Omni-directional	Omni-directional	Omni-directional
GPS Data Frequency Range (MHz) 1575 1575 1575 VSWR <1.5:1 ± 4MHz	Impedance		50Ω	50Ω	50Ω
Frequency Range (MHΣ) 1575 1575 1575 VSWR 1.5.1± 4MHz 4.5.1± 4MHz 4.5.1± 4MHz Gain: LNA 26dB 26dB 26dB Polarisation Right Hand Circular Right Hand Circular Right Hand Circular Operating Voltage 3 - 7V DC (fed via coax)	Max Input Power (W	/)	25	25	25
VSWR < 1.5:1±4MHz 4.15:1±4MHz < 1.5:1±4MHz 2.6dB 2.7dV C (fed via coax) 3 - 7V DC (fed via coax) 4 De secure de via coax) 4 De secure de via coax) 4 De	GPS Data				
Gain: LNA 26dB 26dB 26dB 26dB Polarisation Right Hand Circular Right Hand Circular Right Hand Circular Right Hand Circular Operating Voltage 3 - 7V DC (fed via coax) 3 - 7V DC (fed via coax) 3 - 7V DC (fed via coax) Current Typical 14mA Typical 14mA Typical 14mA Mehabata Mip Length 465 417 370 Base Height 18.5 18.5 18.5 Base Length 60 60 60 Base Length 60 60 60 Base Length 60 50 50 Operating Temp(*C) 40° / +80°C 40° / +80°C 40° / +80°C Material Engineering plastic Engineering plastic Engineering plastic Engineering plastic Colour Black Black Black Black Black Notation State Institute In	Frequency Range (M	1Hz)	1575	1575	1575
Polarisation Right Hand Circular Right Hand Circular Right Hand Circular Operating Voltage 3 - 7V DC (fed via coax) 3 - 7V DC (fed via coax) 3 - 7V DC (fed via coax) Current Typical 14mA Typical 14mA Typical 14mA Methanical Data Whip Length 465 417 370 Base Height 18.5 18.5 18.5 Base Length 60 60 60 Base Width 50 50 50 Operating Temp (*C) -40° / +80°C -40° / +80°C -40° / +80°C Material Engineering plastic Engineering plastic Engineering plastic Colour Black Black Black Mounting Data Fixing Panel mount Panel mount Panel mount Hole Size (mm) 15 15 15 Cable Data Agency RG174 RG174 RG174 Capter Data Panel mount Panel mount Panel mount	VSWR		<1.5:1 ± 4MHz	<1.5:1 ± 4MHz	<1.5:1 ± 4MHz
Operating Voltage 3 - 7V DC (fed via coax) 4 Del to A TO	Gain: LNA		26dB	26dB	26dB
Current Typical 14mA Typical 26mB Engineering 18bic Engineering 18bic Engineering plastic Black Black Black Black	Polarisation		Right Hand Circular	Right Hand Circular	Right Hand Circular
Methanical Data Methanical Data Whip Length 465 417 370 Base Height 18.5 18.5 18.5 Base Length 60 60 60 Base Width 50 50 50 Operating Temp (*C) -40° / +80°C -40° / +80°C 40° / +80°C Material Engineering plastic Engineering plastic Engineering plastic Colour Black Black Black Black Mounting Data Time Panel mount Panel mount Panel mount Panel mount Panel mount Hole Size (mm) 15 <	Operating Voltage		3 - 7V DC (fed via coax)	3 - 7V DC (fed via coax)	3 - 7V DC (fed via coax)
Dimensions (mm) Whip Length 465 417 370 Base Height 18.5 18.5 18.5 Base Length 60 60 60 Base Width 50 50 50 Operating Temp (**) -40° / +80°C -40° / +80°C 40° / +80°C Material Engineering plastic Engineering plastic Engineering plastic Colour Black Black Black Mounting Data: Fixing Panel mount Panel mount Panel mount Hole Size (mm) 15 15 15 Cable Data Cable Size (mm) 2.8 2.8 2.8 Cable Gate Cable Gate FME socket RG174 RG174 Cable Gate 15 2.8 2.8 2.8 Cable Gate FME socket FME socket FME socket Cable Gate FME socket FME socket FME socket Cable Gate <td>Current</td> <td></td> <td>Typical 14mA</td> <td>Typical 14mA</td> <td>Typical 14mA</td>	Current		Typical 14mA	Typical 14mA	Typical 14mA
Base Height 18.5 18.5 Base Length 60 60 60 Base Length 50 50 50 Operating Temp (*) -40° / +80°C -40° / +80°C -40° / +80°C Material Engineering plastic Engineering plastic Engineering plastic Colour Black Black Black Mounting Data Fixing Panel mount Panel mount Panel mount Hole Size (mm) 15 15 15 Cable Data Capped RG174 RG174 RG174 RG174 Thickness (mm) 2.8 2.8 2.8 Length (m) 0.3 0.3 0.3 Termination FME socket FME socket FME socket Comms Cable Type RG174 RG174 RG174 Comms Cable Thickness (mm) 2.8 2.8 2.8 Comms Cable Thickness (mm) 2.8 2.8 2.8 2.8	Mechanical Data				
Dimensions (mm) Base Length 60 60 50 Operating Temp (*C) -40° / +80°C -40° / +80°C -40° / +80°C -40° / +80°C Material Engineering plastic Engineering plastic Engineering plastic Engineering plastic Colour Black Black Black Black Mounting Data Fixing Panel mount Panel mount Panel mount Hole Size (mm) 15 15 15 Cable Data Type RG174 RG174 RG174 Agency (a) Black 2.8 2.8 Length (m) 0.3 0.3 0.3 Type RG174 RG174 RG174 Colspan="3">RG174 RG174 RG174 Colspan="3">Colspan="3">RG174 RG174 RG174 Colspan="3">Colspa		Whip Length	465	417	370
Base Length 60 60 60 Base Width 50 50 50 Operating Temp (°C) -40° / +80°C -40° / +80°C -40° / +80°C -40° / +80°C Material Engineering plastic Engineering plastic Engineering plastic Engineering plastic Colour Black Black Black Black Black Mounting Data Fixing Panel mount Panel mount Panel mount Panel mount Panel mount Cable Data Type RG174 RG174 RG174 RG174 GPS Cable Type RG174 RG174 RG174 RG174 Chickness (mm) 2.8 2.8 2.8 2.8 Chickness (mm) 0.3 0.3 0.3 Comms Cable Type RG174 RG174 RG174 Comms Cable Thickness (mm) 2.8 2.8 2.8 Comms Cable Thickness (mm) 2.8 2.8 2.8	Dimensions (mm)	Base Height	18.5	18.5	18.5
Operating Temp (°C) 40° / +80°C -40° / +80°C -50°C	Dimensions (mm)	Base Length	60	60	60
Material Engineering plastic Engineering plastic Engineering plastic Colour Black Black Black Mounting Data Fixing Panel mount Panel mount Panel mount Hole Size (mm) 15 15 15 Cable Data Type RG174 RG174 RG174 RG174 Cable Data 2.8 2.8 2.8 2.8 Length (m) 0.3 0.3 0.3 0.3 Thickness (mm) 2.8 2.8 2.8 2.8 Comms Cable Type RG174 RG174 RG174 RG174 Comms Cable Thickness (mm) 2.8 2.8 2.8 2.8 Comms Cable Thickness (mm) 2.8 2.8 2.8 2.8 Comms Cable Length (m) 0.3 0.3 0.3 0.3		Base Width	50	50	50
Colour Black Black Black Mounting Data Fixing Panel mount Panel mount Panel mount Hole Size (mm) 15 15 15 Cable Data Type RG174 RG174 RG174 RG174 Thickness (mm) 2.8 2.8 2.8 Length (m) 0.3 0.3 0.3 Termination FME socket FME socket FME socket Type RG174 RG174 RG174 Comms Cable Thickness (mm) 2.8 2.8 Length (m) 0.3 0.3 0.3	Operating Temp (°C)		-40° / +80°C	-40° / +80°C	-40° / +80°C
Mounting Data Fixing Panel mount Panel mount Panel mount Hole Size (mm) 15 15 15 Cable Data Type RG174 RG174 RG174 Thickness (mm) 2.8 2.8 2.8 Length (m) 0.3 0.3 0.3 Termination FME socket FME socket FME socket Type RG174 RG174 RG174 Comms Cable Thickness (mm) 2.8 2.8 2.8 Length (m) 0.3 0.3 0.3 0.3	Material		Engineering plastic	Engineering plastic	Engineering plastic
Fixing Panel mount Panel mount Panel mount Hole Size (mm) 15 15 15 Cable Data Type RG174 RG174 RG174 Thickness (mm) 2.8 2.8 2.8 Length (m) 0.3 0.3 0.3 Termination FME socket FME socket FME socket Type RG174 RG174 RG174 Comms Cable Thickness (mm) 2.8 2.8 2.8 Length (m) 0.3 0.3 0.3 0.3	Colour		Black	Black	Black
Hole Size (mm) 15 15 15 15 15 15 15 15 15 15 15 15 15	Mounting Data				
Cable Data Type RG174 RG174 RG174 Thickness (mm) 2.8 2.8 2.8 Length (m) 0.3 0.3 0.3 Termination FME socket FME socket FME socket Type RG174 RG174 RG174 Thickness (mm) 2.8 2.8 2.8 Length (m) 0.3 0.3 0.3	Fixing		Panel mount	Panel mount	Panel mount
Matrice Type RG174 RG174 RG174 Thickness (mm) 2.8 2.8 2.8 Length (m) 0.3 0.3 0.3 Termination FME socket FME socket FME socket Type RG174 RG174 RG174 Thickness (mm) 2.8 2.8 2.8 Length (m) 0.3 0.3 0.3	Hole Size (mm)		15	15	15
GPS Cable Thickness (mm) 2.8 2.8 2.8 Length (m) 0.3 0.3 0.3 Termination FME socket FME socket FME socket Type RG174 RG174 RG174 Thickness (mm) 2.8 2.8 2.8 Length (m) 0.3 0.3 0.3	Cable Data				
GPS Cable Length (m) 0.3 0.3 0.3 Termination FME socket FME socket FME socket Comms Cable Type RG174 RG174 RG174 Thickness (mm) 2.8 2.8 2.8 Length (m) 0.3 0.3 0.3	GPS Cable	Туре	RG174	RG174	RG174
Length (m) 0.3 0.3 0.3 Termination FME socket FME socket FME socket Type RG174 RG174 RG174 Thickness (mm) 2.8 2.8 2.8 Length (m) 0.3 0.3 0.3		Thickness (mm)	2.8	2.8	2.8
Type RG174 RG174 RG174 Comms Cable Thickness (mm) 2.8 2.8 2.8 Length (m) 0.3 0.3 0.3		Length (m)	0.3	0.3	0.3
Comms Cable Thickness (mm) 2.8 2.8 2.8 Length (m) 0.3 0.3 0.3		Termination	FME socket	FME socket	FME socket
Comms Cable Length (m) 0.3 0.3 0.3	Comms Cable	Туре	RG174	RG174	RG174
Length (m) 0.3 0.3 0.3		Thickness (mm)	2.8	2.8	2.8
Termination FME plug FME plug FME plug		Length (m)	0.3	0.3	0.3
		Termination	FME plug	FME plug	FME plug

GPS Combination Antenna with Diplexer for Mobile Car Kits



GPSK-CK

Excellent performance
Active GPS element
Single hole fixing

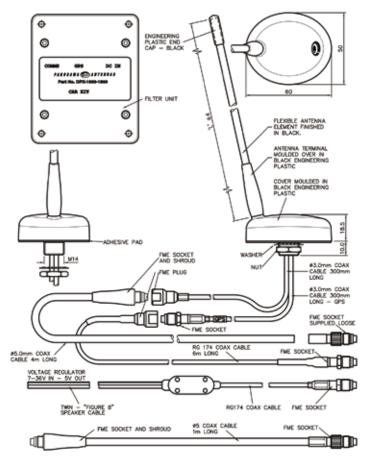
This antenna system is required for hand portable car kit use, where a common antenna connection is supplied.

The GPSK antenna range is a dual function, high performance TETRA antenna with an active GPS element.

The GPSK range covers frequencies from 300MHz to 470Mhz, depending on the equipment requirements. With the ability to mount on a roof up to 6mm thick using only a single 15mm hole.

The dual functionality of the Panorama GPSK range makes the antenna a popular choice for police, buses, taxi's and other public service and utility vehicles.

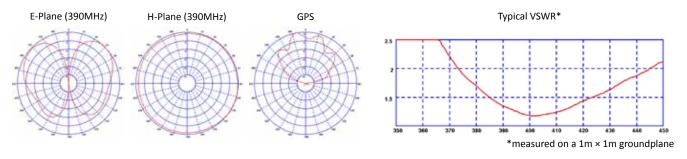
Technical Drawing





GPS ANTENNA





Part No.					
		GPSK-R1-MOT-CK	GPSK-R2-MOT-CK	GPSK-TET-MOT-CK	GPSK-S4-MOT-CK
Electrical Data					
Frequency Range (M	1Hz)	300-334	350-370	380-430	450-470
Operational Band		R1	R2	TET	S4
Gain: Isotropic		2dBi	2dBi	2dBi	2dBi
Compared to ¼ wave	е	OdB	0dB	0dB	OdB
Polarisation		Vertical	Vertical	Vertical	Vertical
Pattern		Omni-directional	Omni-directional	Omni-directional	Omni-directional
Impedance		50Ω	50Ω	50Ω	50Ω
Max Input Power (W	/)	50	50	50	50
GPS Data					
Frequency Range (M	1Hz)	1575	1575	1575	1575
VSWR		<1.5:1 ± 4MHz	<1.5:1 ± 4MHz	<1.5:1 ± 4MHz	<1.5:1 ± 4MHz
Gain: LNA		26dB	26dB	26dB	26dB
Polarisation		Right Hand Circular	Right Hand Circular	Right Hand Circular	Right Hand Circular
Operating Voltage		3 - 7V DC (fed via coax)	3 - 7V DC (fed via coax)	3 - 7V DC (fed via coax)	3 - 7V DC (fed via coax
Current		Typical 14mA	Typical 14mA	Typical 14mA	Typical 14mA
Mechanical Data					
	Whip Length	201	179	163	137
· · · · ·	Base Height	18.5	18.5	18.5	18.5
Dimensions (mm)	Base Length	60	60	60	60
	Base Width	50	50	50	50
Operating Temp (°C)		-40° / +80°C	-40° / +80°C	-40° / +80°C	-40° / +80°C
Material		Engineering plastic	Engineering plastic	Engineering plastic	Engineering plastic
Colour		Black	Black	Black	Black
Mounting Data					
Fixing		Panel mount	Panel mount	Panel mount	Panel mount
Hole Size (mm)		15	15	15	15
Cable Data					
GPS Cable	Туре	RG174	RG174	RG174	RG174
	Length (m)	6	6	6	6
	Termination	FME Socket	FME Socket	FME Socket	FME Socket
	Туре	CS23	CS23	CS23	CS23
Comms Cable	Length (m)	5	5	5	5
	Termination	Bare end with loose FME	Bare end with loose FME	Bare end with loose FME	Bare end with loose FM
Radio Cable	Length (m)	1	1	1	1
	Termination	FME Socket	FME Socket	FME Socket	FME Socket
Voltage Regulator (part No. VR5-F)	Length (m)	1	1	1	1
	More Information	See page 68	See page 68	See page 68	See page 68