










# Enterprise M2M terminals

Inmarsat's machine-to-machine (M2M) services are accessible via small, lightweight, satellite terminals, which are quick to set up, easy to use and integrate seamlessly with bespoke applications.

A range of certified terminals are available for mobile and fixed use, providing remote management and performance options to suit different operational needs in the most extreme environmental conditions.

|                             |                                   | BGAN M2M  |   |   |   |  | IsatData Pro   |  |   |  |
|-----------------------------|-----------------------------------|---|---|---|---|--|--|--|---|--|
|                             |                                   | <br><b>Hughes 9502</b><br>(external antenna) | <br><b>Hughes 9502</b><br>(integrated antenna) | <br><b>Cobham ES40</b>   | <br><b>Hughes 9450-C11 Mobile</b> | <br><b>SABRE Ranger 5000</b>  | <br><b>IsatData Pro 782</b>                                   | <br><b>IDP 800 series</b> | <br><b>OGi</b>   | <br><b>ST6100</b> |
| Technical specifications    | Form factor                       | Separate terminal with external antenna   | Single terminal with integrated antenna   | Single terminal with integrated antenna   | Separate terminal with external mobile tracking antenna   | Single Piece Terminal with integrated antenna  | Satellite and 2G/3G hybrid terminal for use with external antenna  | Low profile terminal for asset tracking  | Satellite Modem for OEM integration   | Terminal unit with integrated antenna  |
|                             | Manufacturer                      | Hughes<br>BGAN.hughes.com   | Hughes<br>BGAN.hughes.com   | Cobham<br>Cobham.com  | Hughes<br>BGAN.Hughes.com   | AddValue Innovation Pte Ltd<br>wideye.com.sg   | SkyWave<br>skywave.com   | SkyWave<br>skywave.com   | Orbcomm<br>Orbcomm.com  | SkyWave<br>skywave.com   |
|                             | Dimensions (W x H x D) and weight | Terminal 200 x 150 x 45mm, 1.5kg<br>Antenna 385 x 385 x 33mm, 1.9kg   | 275 x 275 x 84mm 3.8kg  | 202 x 202 x 51.8 mm 1.6kg   | Terminal 281 x 234 x 46mm 2.3kg<br>Antenna 252 x 119 2.0kg  | 241 x 239 x 71mm 2.5kg   | 115 x 136 x 41mm<br>Transceiver: 2.5kg/3.3kg (without battery/with battery)  | 432 x 147 x 25mm 1.3kg   | Modem: 99 x 64 x 10mm<br>Antenna:<br>Low profile: 126 x 93 x 25mm<br>Low elevation: 126 x 93 x 76mm | 127 x 127 x 49mm 0.46kg  |
|                             | Interfaces                        | RJ45, Ethernet, GNSS and USB (for management only)  | RJ45, Ethernet, GNSS and USB (for management only)  | 1x RJ45 Ethernet with PoE,<br>1x Micro USB for external cellular modem, 1x 3pin for I/O, 1 x 8 pin Ethernet interface, 1 x 2 pin for DC power input | 4 x (PoE) ports, Multi-user WiFi  | 2 x Ethernet Ports (RJ45), 2 x 12 Pin Terminal Block, 1 x RS232 / RS485 Modbus, 1 x RS232 (debug), 4 x GPIO - Output, 4 x GPIO - Input, 1 x Analog Input Port, 1 x Local Wakeup - Input<br>1 x Power Supply Input (2 wires), Terminal Block, 1 x DC Output, 1 x Antenna Pointing Switch, 5 x Pointing LEDs, 1 x Antenna Pointing Buzzer, 1 x Safe Mode Button, 1 x Micro USB Port (Reserved) | 2 x RS232, 1 x RS485<br>4 x digital/analogue inputs/ outputs,<br>2 x dedicated outputs (sink-ground)<br>1-CAN bus, 1-Wire, Accelerometer: 3 Axis | 1 - RS232, 3 digital/analogue, internal accelerometer  | Mini PCI Express: 52-pin edge connector   | RS232, RS485, 4 x digital/analogue   |
|                             | Power requirements                | 12 or 24 VDC  | 12 or 24 VDC  | 10.5-32VDC Pin Connector  | 12 or 24 VDC  | 10.8 - 32 VDC  | 9 - 32VDC (load dump protected) and battery backup   | 9-32 VDC (load dump protected) or integrated battery   | 5.0 VDC to 15 VDC   | 9-32 VDC   |
|                             | Power consumption                 | Transmit: <20W<br>Idle - regional beam: 1W<br>Off: (wake on packet): <50mW  | Transmit: <20W<br>Idle - regional beam: 1W<br>Off: (wake on packet): <50mW  | Standby : 1.9W (@ 12VDC)/ 3.5W (PoE)<br>Transmit : 19W (typical)<br>Off (wake on GPIO): 0.1W @12VDC<br>Off (wake on LAN): 0.9W @ 12VDC              | Transmit: <50 W<br>Idle: 25 W<br><br>Does not include power supplied to PoE devices                                 | Transmit: 20W(typical)<br>Idle: <1W<br>Off: (wake on packet): <50mW  | Transmit: 1A, Cellular: 153mA<br>GPS: 32mA, Receive: 64mA, Cellular: 35mA, Sleep: 110µA  | Transmit: 750mA, GPS: 40mA<br>Receive: 83mA, Sleep: 100µA  | Transmit mode: 750 mA@12VDC<br>GPS on: ~ 70mA<br>Receive mode: ~ 80 mA@12VDC                        | Transmit: 750mA, GPS: 40mA<br>Receive: 83mA, Sleep: 100 A  |
|                             | Power sources                     | Mains (with adapter), solar, battery  | Mains (with adapter), solar, battery  | Mains (with adapter), Power over Ethernet, battery, solar,  | Mains (with adapter), vehicle/ vehicle battery  | Mains (with adapter), solar, battery   | Mains (with adapter), solar, battery   | Mains, battery (up to 3 years life depending on usage)   | N/A   | Mains (with adapter), solar, battery   |
| Operating temperature range | -40°C to +75°C                    | -40°C to +75°C  | -40 to 75°C   | Modem ~25° C to +55°C (operating)<br><br>Antenna ~25° C to +55° C (operating)<br>~40° C to +80° C (survival)  | -40°C -to- +75°C  | Terminal and antenna: -40°C to +85°C;<br>Back-up battery: -10°C to +60°C   | -40°C to +85°C depending on battery option   | Operating: -40C to +85C<br>Storage: -40C to +85C   | -40°C to +85°C  |  |

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