



Intellex CMR-6100

Cellular Multi-Protocol RFID Reader

- Industry-leading range and read/write reliability up to 100m in open space
- Uses ISO/IEC 18000-6:2010 standard for high performance battery-assisted passive RFID
- Compatible with ISO/IEC 18000-6:2010 and EPCglobal C1G2 standards
- Supports up to two antenna pairs
- USB, Serial, Ethernet and GPIO Connectivity
- Exceptional ease of use
- Backup power port
- Integrated GSM cellular module
- Integrated GPS

The Intellex CMR-6100 cellular multi-protocol RFID reader combines unsurpassed read/write reliability and performance in difficult to read environments with GSM cellular and GPS connectivity for easy deployments at remote or mobile worksites. Built with Intellex XC3 Technology™, the CMR-6100 reader's advanced design provides backward compatibility with EPCglobal C1G2 certified tags with the maximum allowed 1 watt transmit power, and more than 10X range extension to greater than 100 meters using the Manchester-encoded Battery Assisted Passive RFID (BAP) protocol extensions in the ISO/IEC 18000-6:2010 standard.

The CMR-6100 supports up to two bistatic antenna pairs for flexible installation. It is designed in a low profile form factor with built-in mounting holes for easy installation on walls or other surfaces. The system can operate with unregulated power sources from 10.5 V to 28 V DC. It includes an additional power input that can be used as a backup source, such as via an automobile battery.

The built-in WAN module allows the CMR-6100 to connect to a remote server using the Intellex WAN API. Data can be pushed from the reader to a server or a server can pull data from a reader. The CMR-6100 also provides support for autonomous operation enabling the CMR-6100 to operate independently without requiring control from an external client/gateway. The Autonomous API supports data buffering in the event that there is no data connection, and data formatting so that data can be sent out in JSON or XML or other formats. The autonomous scripts can be updated and re-configured using the reader web pages or through a WAN connection.

The 500 MHz ARM Cortex A8 based processor with 256 MB of RAM and 512 MB of flash gives the CMR-6100 the most powerful processor in an RFID reader. The CMR-6100 supports two general purpose inputs and two outputs through the standard GPIO connector.

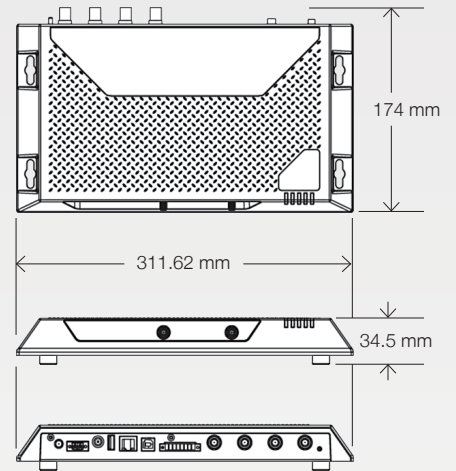
Product Features

Advanced Design	Leading Bistatic Receive Sensitivity (-120 dBm) High read/write accuracy in very challenging RF environments
	500 MHz ARM Cortex A8 Processor Fast processor for web and Java based applications 256MB RAM, 512 MB Flash
	Maximum Transmit Output Power Maximum range with passive tags
	Integrated Cellular WAN Module with Integrated GPS
	Independent Backup Power Battery Input
Standards	EPCglobal C1G2 Global interoperability with passive tags
	ISO/IEC 18000-6:2010 Manchester BAP tags have range over 100 meters
Configurability	Multiprotocol Compatible with both standard EPC C1G2 tags and high performance ISO/IEC 18000-6:2010 BAP tags
	Flexible Connectivity Options Ethernet, serial, USB, GSM, GPRS
	Range of Forward and Reverse Rates Allows fine tuning for best mix of speed and range

Specifications

Physical Characteristics	Dimensions	12.27" x 6.85" x 1.36" (311.62 mm x 174 mm x 34.5 mm)
	Weight	2.9 lbs (1.32 kg)
	Visual Status Indicators	LEDs for power (green), transmit (orange), boot (green), network (yellow) and fault (red)
Connectivity	Communications	Ethernet RJ-45, USB type Host, serial over USB type B, GPIO, GSM
	RF Connector Type	Reverse -TNC for RFID, SMA female jack for GSM and GPS
	Antenna Ports	2 transmit, 2 receive (2 bistatic pairs) for RFID; 1 GSM, 1 GPS
	Power Supply	24V (single) included range (10.5-28 V); Backup power port range (10.5-28 V)

Design



Protocol	Standards	EPCglobal C1G2 passive, ISO/IEC 18000-6:2010 Manchester BAP
	Networks	802.3, TCP/IP, DHCP or Static IP, NTP
	GPIO	2 inputs, 2 outputs, 5V
	C1G2 Pie Forward Link Tari	25 - 6.25 sec
	C3 Manchester Forward Link Rates	8 - 128 Kbps
	Miller Backscatter Link Frequencies, M Ratio	BLF: 80 - 320 KHz, M: 2 - 128
	Reverse Link Data Rates (BLF/M)	2.5 - 160 Kbps
Host Application Protocols	Windows	DLL API
	Linux	XML API
Management and Configuration	Autonomous	Ruby
Performance	Tag Maximum Range	C1G2 up to 10m; C3 up to 100m
	Transmitter RF Output Power	0 to +30 dBm, 1 dB steps, +/- 1 dB accuracy
	Receiver Sensitivity	-120 dBm at 2.5 Kbps
	Frequency Range	NA 902-928 MHz Europe 865.6-867.6 MHz Regulatory Dependent
Environmental	Temperature - Operating	-20°C to +70°C
	Temperature - Storage	-40°C to +80°C
	Humidity Standard	IEC 60068-30/78, 5-95% non-condensing
	Vibration Standard	IEC 60068-2-6
Compliance/ Certifications	EMC	FCC Part 15 Class B
	Agency Listings	UL 60950, cUL C22.2 No. 60950-00
	RoHS	Restriction of Hazardous Materials Compliance



The CMR-6100 supports the Intellex XC3 Technology Family of Tags:

- TMT-8500 - Temperature Tag
- STT-8000 - Standard Tag
- SMT-8100 - Metal Tag
- BAT-8300 - Badge Tag
- FBT-8400 - Fob Tag



Hardware and F/W Management	Firmware Upgrade	Host based firmware upgrade capabilities
	Host Interface Protocols	Serial port, HDLC formatting
Software Support	Windows DLL	Windows XP, Windows 7 (32 bit)
	XML	Multi-platform interface
	Cold Chain API	DLL or XML API
	.NET Support	Compatible with Microsoft® .NET Compact Framework
Security	Data collection agent on CMR autonomously executes custom logic and pushes collected data over secure cellular network into the Intellex cloud-based data repository. Third party client applications can be developed in any programming language on any operating system and can retrieve data from the Intellex Data Service using the REST API over secure HTTPS. Data can be formatted as JSON or XML. Valid credentials must be provided with each request.	
Web Server	The Intellex Reader software suite contains a built-in web server which provides web access for configuring readers and command mode for full RF functionality.	
Warranty	The CMR-6100 is warranted against defects in workmanship and materials for a period of one year (12 months). See Terms of Sale for warranty details.	

For More Information

To learn more please visit our website or contact us directly. We look forward to hearing from you.

www.intelleflex.com

+1 877 694 3539 Toll Free

+1 408 200 6500 International/Direct

info@intelleflex.com

Ordering Information

Part Number	Description
CMR-6100	Cellular Multiprotocol RFID Reader; multiple country frequencies supported. Consult Intellex for currently supported countries.

Specifications are subject to change without notice.