

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from, Europe, America and south Asia, supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts, Customers Priority, Honest Operation, and Considerate Service", our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip, ALPS, ROHM, Xilinx, Pulse, ON, Everlight and Freescale. Main products comprise IC, Modules, Potentiometer, IC Socket, Relay, Connector. Our parts cover such applications as commercial, industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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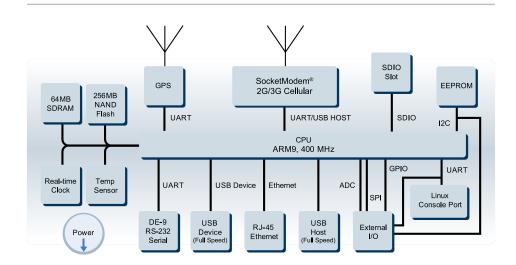








The MultiConnect® OCG-D open communications gateways with CoreCDP® comprise an open Linux development environment and a fully certified hardware offering that includes multiple interfaces and internal peripherals in one application-ready end user solution. Applications that require device networking capability can now be embedded directly onto select MultiTech hardware, providing a flexible, quick and cost-effective way to bring your solution to market.



#### **DEVELOPMENT HARDWARE**

- Application-ready hardware platform
- · Includes GPS and cellular modem
- Multiple interfaces available (serial, USB, Ethernet)
- · 36-pin GPIO interface
- · FCC, IC, UL, PTCRB and R&TTE certified

#### **CORECDP SOFTWARE**

- · Custom Linux distribution
- Provides complete Linux build environment
- Cross-compile thousands of open source software packages
- Create custom applications in a short period of time

#### **SUPPORT**

- · Advanced developer support available
- Established developer community available at www.multitech.net
- Two-year warranty

#### **DEPLOYMENT MODELS**

- Non-cellular, cellular-only and cellular/ GPS models available
- Standard and customized deployment models available
- FCC, IC, UL, PTCRB and R&TTE certified

# **BENEFITS**

- · Linux-based open source software
- Proven hardware for the development and deployment of custom applications
- Cost-effective alternative to custom manufacturing
- Comprehensive service and developer support

# **SPECIFICATIONS**

Model	MTCDP-H5	MTCDP-EV3	MTCDP-E1	MTCDP-G2
Performance	HSPA+	EV-DO CDMA2000 1xRTT	EDGE: E-GPRS Class 12 GPRS: Class 10	GPRS Class 10
Frequency Bands (MHz)	Hepta-band: 800/850/900/AWS 1700/1900/2100 Triple-band: 2100/1900/850 with Rx diversity	Dual-band: 800/1900 CDMA; Up to 3.1 Mbps downlink/Up to 1.8Mbps uplink	Quad-band: GSM/ GPRS/EDGE 850/900/1800/1900	<b>Quad-band:</b> GSM 850/900/1800/1900
Environmental†				
Operating Temperature*	-22° to +140° F (-30° to +60° C)*	-40° to +167° F (-40° to +75° C)*	-31° to +167° F (-35° to +75° C)*	-40° to +185° F (-40° to +85° C)*
* UL Listed @ 104° F (40° C), limited by power supply. UL Certification does not apply or extend to an ambient above 104° F (40° C) and has not been evaluated by UL for ambient greater than 104° F (40° C).				
Storage Temperature	-40° to +185° F (-40° to +85° C)			
Humidity	20% to 90% RH, noncondensing			
Physical Description				
Dimensions (L x W x H)	2.8" x 7.0" x 1.2" (7.1 cm x 17.8 cm x 3.0 cm)			
Weight	11.5 oz (326 g)			
Certifications				
EMC Compliance <sup>†</sup>	FCC Class B, EN55022, EN55024	FCC Class B	FCC Class B, EN55022, EN55024	
Radio Compliance	FCC Part 22, 24, RSS132, 133, EN301 489-1, EN489-3 (-GP only), EN301 489-7, EN301 511, AS/ACIF S042.1, S042.3	FCC Part 22, 24, RSS132, 133	FCC Part 22, 24, RSS132,133, EN301 489-1, EN489-3 (-GP only), EN301 489-7, EN301 511, AS/ACIF S042.1, S042.3	
Safety†	UL60950-1, cUL60950-1, IEC60950-1	UL60950-1, cUL60950-1, IEC60950-1	UL60950-1, cUL60950-1, IEC60950-1	UL60950-1, cUL60950-1, IEC60950-1, AS/NZS60950-1
Network	PTCRB	N/A	PT	CRB

<sup>†</sup> Specifications for non-cellular versions.

# **CORECDP SOFTWARE SPECIFICATIONS**

## (Version 2.3.3)

Linux Kernel 2.6.35.14

Utilizes OpenEmbedded framework

Tested with the following Linux OS: Ubuntu 10.04 to 12.10, Debian 6 and 7 openSUSE 11.4 - 12.2, Fedora Core 12 - 17, CentOS 6.5

Drivers to support all peripherals included on the platform hardware

Notable Software Versions: Python 2.6.6, JamVM 1.5.4 (Java), Perl 5.10.1. Ruby 1.9.3-p392, PHP 5.3.6

A complete list of software versions is available at www.multitech.net

Networking: PPP, iptables Web Server: lighttpd Remote shell: SSH Database: sqlite3

Network file system: samba

Security: OpenSSL

Software Development Kit: MultiConnect SDK

# HARDWARE SPECIFICATIONS

# **Processor & Memory**

Internal Peripherals	
64MB SDRAM	development models)
256MB NAND flash	Flash Card (included w/development models)
400 MHz ARM9 CPU	2GB industrial grade SD

RTC (Real Time Clock)	Debug 3 pin serial console
Dedicated GPS receiver	port
Cellular modem	Temperature sensor

#### Connections

Connections	
LAN: RJ-45, 10/100BaseT	USB Host: USB 2.0 Full
RS-232 Data: DB-9 female,	Speed (12 Mbps)
921.6K bps max serial speed	Host Connector USB Device: USB 2.0 Full
GSM/GPS Antenna: 50 ohm SMA female	Speed (12 Mbps) mini-B device connector
Power: 2.5mm miniature screw	GPIO: 36-pin Molex connection
SIM: Standard 1.8V & 3V SIM receptacle (mini SIM)	SD Memory Flash Card: SD memory card slot

### **GPIO Functions:\***

Pins 1-9: General Purpose	Pins 30-31: Debug
Input	Pin 32: GPS PPS
Pins 10-14: Analog Input	Pins 33-34: I2C
Pins 15-24: General	Pin 35: No Connect
Purpose Output	Pin 36: Ground (SPI, I2C,
Pins 25-29: SPI	Serial)

<sup>\*</sup> For more specifications on GPIO functionality, visit www.multitech.net

### Interfaces

micorrados	
General Purpose LEDs: Power, Cellular Link Status, Ethernet Link, & Speed Programmable LEDs: 5 user-defined, application- specific LEDs	Short Message Services - SMS
	Text & PDU
	Point-to-Point (MO/MT)
GPS	

specific LEDs	
GPS	
Position: 2.5 meters	Sensitivity: Tracking -161
Acquisition: Hot start 1	dBm
second; cold start 29	Protocol: NMEA-0183
seconds avg.	V3.01, GGA, GLL, GSA,
	GSV, RMC, VTG

# **Power Requirements**

Input Power: 9 to 32VDC

#### **HIGHLIGHTS**

# Custom Application Development and Deployment

The MultiConnect OCG-D offers customers the opportunity to develop and deploy custom applications on the same product platform. Developer kits include all the hardware, cables and accessories required to develop unique applications. Once complete, deployment models are available for the sale and distribution of the solution within a proven and approved hardware platform.

#### Linux-Based Open Source

The MultiConnect OCG-D uses the OpenEmbedded framework as the base to provide a custom Linux distribution, known as CoreCDP. This allows developers to cross-compile thousands of open source software packages and to create custom applications in a very short period of time. In many cases, existing applications can easily be run with little or no modification.

# Carrier Approved

All MultiConnect OCG-D developer kits and deployment models are PTCRB approved, relieving customers the burden and expense of obtaining these approvals independently. This also provides a faster time-to-market and improved return on investment.

# Multiple Interface Options

The MultiConnect OCG-D provides the broadest range of interface options, including serial, USB host, and Ethernet, giving customers seamless connectivity to their applications.

# **GPIO**

The 36-pin general purpose input/output connection, which includes SPI, I2C, serial, ADC, and GPS connections, provides multiple ways of interfacing with any application.

# **Proof of Concept**

Customers planning their own internal custom developments can use the MultiConnect OCG-D to create beta units and prototypes for use in voice of customer and proof of concept activities. These models can be generated quickly and with little additional expense. The input from these activities can improve the feature set of the customer's final product.

#### ORDERING INFORMATION

#### Developer Kits

Developer kits include: Modem with GPS receiver, universal power supply, GSM/GPS antenna, GPIO cable, serial debug cable, Ethernet cable, RS-232 cable, compact flash, USB cables, DVD, and screwdriver.

Product	Description	Region
MTCDP-H5-GP-DK-1.0	3G HSPA+ Developer Kit	Global
MTCDP-EV3-GP-N3-DK-1.0	3G EV-DO Developer Kit (Verizon Wireless)	US
MTCDP-EV3-GP-N16-DK-1.0	3G EV-DO Developer Kit (Aeris Communications)	US
MTCDP-E1-GP-DK-1.0	2.5G EDGE Developer Kit	Global
MTCDP-G2-GP-DK-1.0	2G GPRS Developer Kit	Global
MTCDP-GP-DK-1.0	Non-Cellular Developer Kit	Global

#### Deployment Models (includes GPS receiver)\*

Deployment models are modem only. All accessories are sold separately.

Product	Description	Region
MTCDP-H5-GP-1.0	3G HSPA+ Deployment Model	Global
MTCDP-EV3-GP-N3-1.0	3G EV-DO Deployment Model (Verizon Wireless)	US
MTCDP-EV3-GP-N16-1.0	3G EV-DO Deployment Model (Aeris Communications)	US
MTCDP-E1-GP-1.0	2.5G EDGE Deployment Model	Global
MTCDP-G2-GP-1.0	2G GPRS Deployment Model	Global
MTCDP-GP-1.0	Non-Cellular Deployment Model	Global

#### Deployment Models\*

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MTCDP-EV3-N16-1.0	3G EV-DO Deployment Model (Aeris Communications)	US
MTCDP-E1-1.0	2.5G EDGE Deployment Model	Global
MTCDP-G2-1.0	2G GPRS Deployment Model	Global
MTCDP-1.0	Non-Cellular Deployment Model	Global

#### ILS deviceWISE® Models

This OCG product variant comes ready to integrate directly with the deviceWISE Application Enablement Platform (AEP). The deviceWISE AEP provides seamless connectivity and integration across any remote device, any network and any enterprise application in the back office – without any programming. The do-it-yourself platform reduces the risk, time-to-market, complexity and cost of deploying solutions for remote monitoring and control, industrial automation, asset tracking and field service operations. See <a href="https://www.devicewise.com">www.devicewise.com</a> for more information.

Product	Description	Region
MTCDP-H5-1.0-DW	3G HSPA+ deviceWISE Deployment Model	Global
MTCDP-H5-GP-1.0-DW	3G HSPA+ deviceWISE Deployment Model w/ GPS	Global
MTCDP-H5-GP-DK-1.0-DW	3G HSPA+ deviceWISE Developer Kit	Global
MTCDP-EV3-N3-1.0-DW	3G EV-DO deviceWISE Deployment Model (Verizon Wireless)	US
MTCDP-EV3-GP-N3-1.0-DW	3G EV-DO deviceWISE Deployment Model w/ GPS (Verizon Wireless)	USA
MTCDP-EV3-GP-N3-DK-1.0-DW	3G EV-DO deviceWISE Developer Kit (Verizon Wireless)	US

# Accessories

MTOCG-BOB-DK	GPIO Cable and Break-out Board
CA-CDP-GPIO	36-pin, General Purpose Input/Output Cable (open ended)
PS-9VCB-LBC-U-Global	100 - 240V 9V-1.7A changeable blade power supply with three interchangeable blades (U.S., Euro, UK)
ANGSM-GPS-1MM	GSM/GPS Combination Antenna, 9.8 feet (3 meters)
CA-CDP-DEBUG	3-Pin, Serial Debug Cable, 6 feet (1.8 meters)
CA9-9-D	RS-232 Cable, DB9F-DB9M, 6 feet (1.8 meters)
CA-RJ-45	RJ45 (CAT5E, 10/100 Mbps) Cable, 6 feet (1.8 meters)
CA-USB	USB A/B Cable, 4.9 feet (1.5 meters)
CA-USB-A-MINI-B	USB A-to-Mini-B Cable, 3.9 feet (1.2 meters)

<sup>\*</sup> Custom deployment options available. Contact your MultiTech representative for details.

Visit www.multitech.com/solplat/celldev.go for additional product offerings and information.

Produced in the U.S. of U.S. and non-U.S. components. Features and specifications are subject to change without notice.

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#### **SERVICES & WARRANTY**

MultiTech's comprehensive Support Services programs offer a full array of options to suit your specific needs. These services are aimed at protecting your investment, extending the life of your solution or product, and reducing total cost of ownership. Our seasoned technical experts, with an average tenure of more than 10 years, can walk you through smooth installations, troubleshoot issues and help you with configurations.

#### **INSTALLATION SUPPORT**

MultiTech's Installation Support Service delivers priority service with the ability to work one-on-one with an experienced MultiTech technical support engineer, to guide you through the installation process for our products.

# TECHNICAL SUPPORT SERVICES

At MultiTech, we're committed to providing you personalized attention and quality service while providing you a quick response to your product support needs. We have several options of support for you to choose from

For additional information on Support Services as well as other service offerings, please contact your MultiTech representative or visit www.multitech.com/support.go

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