



# HCe700-G

## Handheld computer - GSM/GPRS (Europe)



### FEATURES

#### Converged data and voice in an ergonomic shape and light-weight design

All in one functionality with easy one-handed operation

#### Rugged design

Ideal in rough outdoor environments

#### Integrated tri-radio wireless connectivity

Flexible connection options, including GSM/GPRS, 802.11b/g and Bluetooth™

#### Voice optimized

Ergonomically placed front-mounted speaker, microphone and earpiece for optimal acoustic performance deliver a superior voice experience

#### High performance CMOS imager with 1D and 2D bar code decoding and image capture capabilities

Comprehensive integrated data capture capabilities support many enterprise applications with single device simplicity, reducing capital and operational costs

#### Microsoft® Windows® Mobile 5.0 AKU3 Operating System

The latest technology for robust and dependable performance

#### Backlit keypad with 5-way navigation key

Easy to see and easy to use

#### Bright, backlit transreflective color display with resistive touchscreen

Easy to read in nearly any lighting condition

#### RoHS/WEEE compliant

Meets the latest European environmental regulations

#### Enhanced memory architecture

Persistent storage ensures retention of mission-critical data and configuration; provides support for nearly any application

#### Exceptional power management for extended battery performance

Ensures ample power for full shift use, especially important for field users

#### Application development support with C/C++ and .NET (C#) software development kits and versatile software loader

Enables rapid and low cost application development

#### Terminal emulation (Telnet) ready

Ease of integration into your existing legacy environment

#### Host of communication/charging cradles and accessories

Easy to customize for your particular application and environment

### Designed to Meet the Rigorous Demands of Today's Mobile Workforce

Motorola introduces the HCe700-G, a full featured handheld computer for the mobile worker who needs wide area and local communications capabilities. The HCe700-G provides integrated data and voice capability and anywhere communications connectivity via GSM/GPRS, 802.11b/g and Bluetooth™ wireless technology all integrated into a rugged design, tested to environmental specifications.

The HCe700-G provides your mobile workforce with access to your enterprise applications so they can respond rapidly and appropriately to any situation, which helps increase productivity and performance at the point-of-activity. With this complete handheld computing solution, you can now seamlessly and securely link people, assets and critical business information together.

**SPECIFICATION SHEET**

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# HCe700-G GSM/GPRS (Europe) Specifications

<b>Physical Characteristics</b>			
Model:	F4707A		
Dimensions:	197.6 mm H x 81.2 mm W x 48.6 mm D (7.78 in. H x 3.2 in. W x 1.91 in. D)		
Tapered down at grip to:	197.6 mm H x 62.6 mm W x 42.4 mm D (7.78 in. H x 2.46 in. W x 1.67 in. D)		
Weight:	554 g (19.5 oz.) fully loaded with battery (128 g) and handstrap (11 g)		
<b>User Interface</b>			
Keypad:	40-key plus Power; 5-way navigation key; Send/End keys for voice communications; Alphanumeric (ABC with numeric overlay); Terminal Emulation (F1-F12); Backlit with tactile feedback plus Power		
Indicators — 2 tri-color LEDs:	Right: Charging status and bad battery (in cradle), suspend and critical low battery Left: Application-controlled		
Display:	3.5 in. QVGA (320x240), high contrast, anti-reflective, transfective TFT display for bright daylight conditions and backlit for low-light conditions; tempered glass touchscreen		
Audio:	<i>Speaker:</i> 80 dB SPL @ 30cm (at 2700Hz), 0.5W <i>Mic:</i> Omni-directional, -40 dBV sensitivity @1kHz <i>Earpiece:</i> Low power earpiece speaker, 100 dB SPL DRP @ 1kHz, 10mW, High leak Volume control and voice recording/activation keys		
<b>Processing Power</b>			
Operating System:	Microsoft® Windows® Mobile 5.0 AKU 3 for Pocket PC Phone Microsoft® Windows® Mobile 2003 SE Phone Edition		
Processor:	Intel® XScale PXA270™ Processor @ 624 MHz		
Memory Configuration Flash/SDRAM:	128/128 MB		
Memory Expansion:	Secure Digital (Mini SD), accessible protected slot		
Application Development:	C/C++ SDK and .NET (C#) SDK based on Compact Framework 2.0 to use with Visual Studio 2005		
<b>Data Capture</b>			
Imager:	1D/2D Adaptus™ imaging technology 752 x 480 pixel CMOS area imager		
Illumination:	Red or Green LED		
Aiming:	Laser or Green LED		
Skew and Pitch:	± 40 degrees		
Roll (tilt):	360 degrees omni-directional scanning		
Ambient light:	Darkness to 100,000 lux, with some Depth Of Field degradation in low lighting conditions		
Supported Symbolologies:	1D:	<i>Enabled by default:</i> Codabar, Code 39, Code 128, EAN-13, Interleaved 2 of 5, UPC-A <i>Also supported:</i> China Post, Codablock F, Code 11, Code 16K, Code 32 Pharmaceutical (PARAF), Code 49, Code 93 and 93i, EAN- 8, ISBT 128, Matrix 2 of 5, Korea Post, MSI, Plessey Code, PosiCode, Reduced Space Symbology (RSS-14, RSS Limited, RSS Expanded), Straight 2 of 5 IATA (two-bar start/stop), Straight 2 of 5 Industrial (three-bar start/stop), Telepen, Trioptic Code, UPC-A with Extended Coupon Code, UPC-E, UPC-E1	
	PDF417:	<i>Enabled by default:</i> MicroPDF417, PDF417 <i>Also supported:</i> EAN•UCC Composite, TCIF Linked Code 39 (TLC39)	
	2D:	<i>Enabled by default:</i> 4-CB (4-State Customer Barcode), Aztec Code, ID-tag (UPU 4-State) <i>Also supported:</i> Australian Post, Aztec Mesas, British Post, Canadian Post, Data Matrix, Japanese Post, KIX (Netherlands) Post, MaxiCode, OCR, Planet Code, Postnet, QR Code	
Field of View (FOV):	<b>Distance</b>	<b>Vertical</b>	<b>Horizontal</b>
	5 in.	2.4 in.	3.8 in.
	7 in.	3.4 in.	5.3 in.
	9 in.	4.3 in.	6.7 in.
Depth of Focus (DOF) with Red Illumination (typical):	<b>Code</b>	<b>Near</b>	<b>Far</b>
	Code 39, 15 mil	2.1 in.	12.8 in.
	Code 39, 10 mil	3.2 in.	9.2 in.
	Code 39, 8 mil	3.5 in.	7.6 in.
	UPC, 13 mil 100%	2.1 in.	13.2 in.
	Postnet	4.0 in.	5.9 in.
	12-point OCRA	2.3 in.	9.4 in.
	12-point OCRB	2.5 in.	10.4 in.
	PDF417, ECL4 10 mil	3.1 in.	9.0 in.
	PDF417, ECL4 8 mil	3.3 in.	8.0 in.
	PDF417, ECL4 6.6 mil	4.5 in.	6.2 in.
	MaxiCode, 35 mil	2.0 in.	13.0 in.
	DataMatrix, 15 mil (ECC200)	2.3 in.	10.2 in.

<b>Wired Interfaces</b>					
Connector:	19-pin ruggedized connector				
USB:	v1.1 client				
RS232:	With full hardware flow control				
Power In (charging):	11-15VDC				
<b>Wireless Data Communications</b>					
Infrared:	IrDA 1.1-ready, Support SIR, 115.2Kbps				
<b>WPAN:</b>	Bluetooth™ v1.2 Class 2 (typical 1mW, minimum 10m), internal antenna				
Bluetooth Supported Devices:	Bluetooth Headset (future), Bluetooth Carkit (future), Tested Bluetooth Printers, HF1200 Hands-Free Imager				
Supported Bluetooth Profiles:	GAP, GOEP, OBEX, SPP, DUN (client), FTP, PAN (client), OPP, HFP, HSP				
Bluetooth Security	Mode 1 and 3				
<b>WLAN:</b>	Windows Mobile 2003		Windows Mobile 5.0		
	Native	Enhanced w/Odessey Security Option (future)	Native	Enhanced w/Odessey Security Option (future)	
<b>Supported IEEE Standards</b>					
802.11b/g Wi-Fi certified	•	•	•	•	
802.1x authentication	•	•	•	•	
802.11i			•	•	
<b>Supported Access Control</b>					
WEP (Wired Equivalent Privacy) (open and shared key)	•	•	•	•	
WPA™ (Wi-Fi Protected Access), Personal (ad-hoc) and Enterprise network support. Supporting TKIP (Temporal Key Integral Protocol) and PSK (Pre-Shared Key)	•	•	•	•	
WPA2™, Personal (ad-hoc) and Enterprise network support. Supporting AES (Advanced Encryption Standard) encryption algorithm (FIPS 140-2 compliant, CCMP-based)		•	•	•	
<b>Supported Authentication</b>					
EAP-MD5 (Extensible Authentication Protocol - Message-Digest algorithm 5)			•		
EAP-TLS (Extensible Authentication Protocol - Transport Layer Security)	•	•	•	•	
EAP-PEAP (PEAPv0/EAP-MSCHAPv2) (Extensible Authentication Protocol - Protected Extensible Authentication Protocol)	•	•	•	•	
EAP-LEAP (Extensible Authentication Protocol - Lightweight Extensible Authentication Protocol)		•		•	
EAP-TTLS (Extensible Authentication Protocol - Tunneled Transport Layer Security)		•		•	
EAP-SIM (Extensible Authentication Protocol Method for GSM Subscriber Identity)		•		•	
EAP-AKA (Extensible Authentication Protocol Method for UMTS Authentication and Key Agreement)		•		•	
EAP-FAST (Extensible Authentication Protocol - Flexible Authentication via Secure Tunneling)		•		•	
<b>Supported Federal Government Requirements</b>					
Conforms to FIPS 140 (Federal Information Processing Standard 140) guidelines		•		•	
FIPS 140-2 Level 1 Validated		•		•	
Support for the xSec protocol, with AES encryption		•		•	
Support for FIPS mode enforcement using client lockdown features		•		•	

<b>WWAN:</b>	GSM/GPRS, user accessible SIM card support, internal antenna
Type:	Multi slot class 10 (4 down; 2 up); Max Bit Rate 85.6 Kbps
Frequency Bands:	900MHz: TX 880-915 MHz, RX 925-960 MHz 1800MHz: TX 1710-1785 MHz, RX 1805-188 MHz
Tx Power:	2W 900 MHz; 1W 1800 MHz
Rx Sensitivity:	-104dBm @ 2.44% BER typical
Rx Selectivity:	60dB
Services:	Packet Data, Digital cellular voice, Short Message Service (SMS)
<b>Power</b>	
Battery Pack:	Lithium-Ion, 7.2V, 1800mAh, user replaceable; hot swappable up to 30 minutes
Run Time:	10 hours, application dependent
Max. Charging Time:	4 hours
Charging Cycles:	400 full discharge cycles with minimum 80% capacity remaining
Power Saving Modes:	Configurable with SDK



Back view showing volume control, secured miniSD slot, hand strap and tethered stylus

<b>Environmental</b>	
Operating Temperature:	-20°C to +60°C (-4° to 140°F) with some degradations below 0°C and above 50°C
Storage Temperature:	-30°C to +85°C (-22° to 185°F) without battery
High Humidity	95%@50°C for 8 h (non-condensing)
<b>Durability</b>	
Rain and Dust:	IP64, IEC60529, MIL-STD-810F, Method 506.4 Proc III - Drip Rain
Salt Fog:	MIL-STD-810F, Method 509.4 (8 hours soak, 24 hours dry out)
Drop:	Multiple up to 6 feet (1.8m) drops at various temperatures
Vibration:	MIL-STD-810F method 514.5, Figure 514.5C-1 (1 hour per axis); TIA/EIA 603 para. 3.3.4
Shock (Functional):	MIL-STD-810F Method 516.5, Procedure I
Shock (Crash Hazard when in Vehicle Cradle):	MIL-STD-810F, Method (Crash Hazard) 516.5 Proc V
Ball Impact:	130 g (4.6 oz.) steel ball from 35 cm (13.8 in.) height
Electro Static Discharge (ESD):	±8K Contact, ±15KV Per EN61000-4-2
Solar Radiation:	MIL-STD-810F Method 505.4 Procedure I

<b>Safety Regulatory</b>	
Flammability:	ANSI/UL-94 and ASTM Standards
Electrical Safety:	RTT&E EN 60 950-1
EMI/RFI:	RTT&E EMC: EN 50 360:2001, EN 301-489-01, EN 301-489-07 RFI: EN 301-511, EN 300-328-2 (BT) EMC: EN 301-489-01, EN 301-489-07 and EN 301-489-17, EN 50360, EN 50371

<b>Accessories</b>	
Personal Desktop Cradle:	USB, RS232 pass through and spare battery charging
4-slot Comm. Cradle:	RS232 and Ethernet ports
8-slot Comm. Cradle:	RS232 and Ethernet ports
Vehicle Cradle:	USB and RS232 pass through
Vehicle Power Adapter:	12V, quick disconnect
Serial Cables:	DB25, DB9, quick disconnect
Travel Charger:	220/110Vac
Belt/Shoulder Holster:	Without shoulder strap
Spare Stylus:	Pack of 5
Spare Tethered Stylus:	Pack of 5
Spare Hand Strap:	User replaceable
Spare Battery:	1800mAh, 7.2V



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