

# Frey Master

## POWER TIPS



## Frey Master Mobile Computer

### ELEGANT, INTELLIGENT AND STRONG INTEGRATING EVERYTHING A FIELD STAFF EVER NEEDS

Operators today all ask for an attractive yet sexy equipment in their hand on their daily jobs. This equipment should be no less attractive than their smart phones. At the other end, your corporate customers desire a device which will never fail and can be strong enough to fulfill their heavy daily demands non-stop. Moreover, they expect a device can integrate their smart phone, PDA, and barcode scanner into one to make their physical load lighter and to make their daily works more productive.

The Frey Master mobile computer from Bitatek fulfills all these expectations. Your customers and partners will no longer need to trade between the product design and working demands. The Frey Master gives everything a business equipment should have but it looks and feels exactly like the most contemporary smart phone under spot light in a fancy store. Not to mention all the enterprise functions and features which put the user of Frey Master on the driver's seat with power, vision, scope, and inter-coordination skill set among various tasks. The Frey Master mobile computer, it is the vision of tomorrow which you should never miss, no matter you are an operator or a corporate field staff !

### FEATURES AND BENEFITS

With the advanced features Frey Master comes with, your customers and users can enjoy peak productivity no matter they are in the facility or out in the field.

#### Maximized Display Area within the Comfort Zone

Frey Master is designed to work in the user's hand, single hand. From the real application scenario, the key points affecting the level of comfort and efficiency of the user working with a mobile computer, single handed, are width of the screen and thickness of this device. Always keep user's feeling in mind, Frey Master has been through detailed refining process on mechanical structure design to minimize the thickness and surrounding frame width but without sacrificing any rigidity or ergonomic comfort.

#### Covers All Kinds of Data You Are Working With

Frey Master is designed to work with various data users need to take care of. Top of the line CMOS barcode scanning engine with patented Green Spot feature implemented can capture 1D or 2D barcodes in a flash. Reading barcodes in various environments are real world tasks and Frey Master can do this perfectly no matter you want to do the reading quietly or to do it in a noisy place but without missing the "Good-Read" sign. Frey Master gives photo and video quality no less than your personal smart phone. All these image data can be streamlined into related working process to further enhance working efficiency and accuracy.

#### Physical Keypad Making Data Entry Without Affecting Screen Display

Even equipped with high resolution display screen, Frey Master also comes with physical keypad to facilitate immediate, intuitive data entry without affecting any screen display during busy daily working routines. Specially coated key tops will survive rough handling process (abrasive-resistant). Ergonomic layout gives best finger reach trajectory to avoid physical fatigue. Best adjusted center of weight makes it an easy job holding Frey Master in hand for long working hours, even for female users.

#### Bluetooth 4.1 LE

Even though most users do not pay too much attention on the Bluetooth features a mobile computer is equipped, still you need to know exactly how good it is to have Bluetooth 4.1 LE featured in your Frey Master. Not only costing less energy, Bluetooth 4.1 actually provides much more efficient data file transfer, but also it can work in parallel with 4G LTE without interfering each other. Bluetooth 4.1 can work as a hub, also it can work as an end-point. It can bring Frey Master up to the Cloud for data synchronization without activating power consuming WiFi module. A Bluetooth 4.1 LE device like Frey Master can be linked with Cloud through other near-by WiFi device via IPv6 protocol. BQB certified quality and performance make Bluetooth 4.1 LE a feature behind the screen but important enough you should never ignore.



### Frey Master, Strong and Always Be Ready

With appearance like a smart phone, Frey Master should never be compared against a smart phone on the rigidness and reliability. IP 65 makes Frey Master survives drop on concrete. All the enclosure sealing makes working in the rain an easy routine for Frey Master. Corning Gorilla glass on the touch panel protects Frey Master screen against scratches and accidental impacts which are commonly happened on the job in the field.

### Power House of Frey Master

Built on the Qualcomm Snapdragon platform, Frey Master handles everything a business person will face in the busy daily works, phone calls in and out, mail messages, video conference, other social networks interactions, web access, other apps for various demands, ---etc. Processing speed is one thing but power consumption is another conjugate factor behind. Qualcomm platform is much more economical on power consumption ( average 15% less than similar speed MCU's in the market ) and Frey Master cares about your fuel gauge even more than you do.

### Flexible Battery Management

Unlike a smart phone, Frey Master comes with replaceable main battery. With a spare main battery, Frey Master will always be ready for work. There will be no down time at all. This is extremely attractive to users who keep working efficiency as priority one.

### High Speed Networking Communication

Frey Master has IEEE 802.11 a/b/g/n/ac on board. Compared against last generation networking features, Frey Master is almost 10-time faster on file transfer data rate. Band width is also 4-time wider to adopt the growing file size due to modern audio/video data types.

802.11	Published	Freq.(GHz)	Band Width(MHz)	Data Rate (Mbits/sec)	MIMO
	06 / 1997	2.4	20	1, 2	N/A
a	09 / 1999	5 3.7	20	6, 9, 12, 18, 24, 36, 48, 54	N/A
b	09 / 1999	2.4	20	1, 2, 5.5, 11	N/A
g	06 / 2003	2.4	20	6, 9, 12, 18, 24, 36, 48, 54	N/A
n	10 / 2009	2.4 / 5	20	7.2, 14.4, 21.7, 28.9, 43.3, 57.8, 65, 72.2	4
			40	15, 30, 45, 60, 90, 120, 135, 150	
ac	01 / 2014	5	20	87.6, max.	8
			40	200, max.	
			80	433.3, max.	
			160	866.7, max.	

### Seamless Roaming, Never Miss Any Data Packet

Frey Master will establish optimized channel list in order to locate the near-by best fit Access Point as the candidate of next Access Point when the current Access Point signal is dropping. When roaming among various Access Points in the same network, Frey Master will use FT ( Fast Basic Service Set Transition ) protocol to proceed faster verification. FT protocol can process PSK and 802.1X verifications efficiently. In busy application environment, Frey Master can complete data transmission/receiving Access Point switch within 100-msec without missing any data packet.

### Quick Charge, Never Sitting Idle Because of Empty Gas Tank

With Quick Charge feature Qualcomm platform provided, Frey Master can quickly recharge the battery pack ( Frey Master can recharge the battery pack from 0% to 60% within 30-minute ) either during lunch break or in the vehicle while traveling from point-A to point-B, and ready for the user to take next task. Substantially lower the down-time, Frey Master surely will help increasing your working efficiency and productivity.

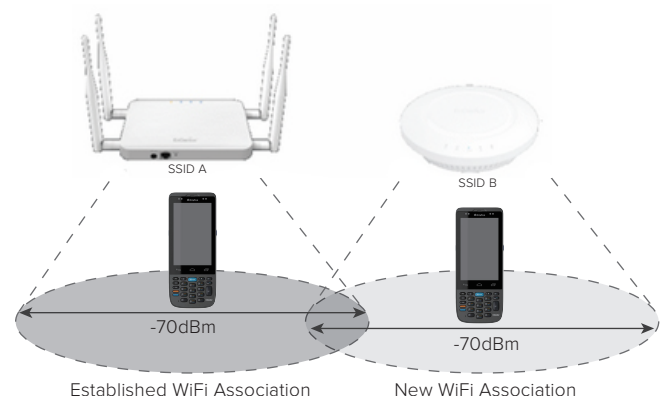


### 4G LTE High Performance Communication

Up to 50-times faster than old 3G equipment on data rate to Frey Master provides leading-edge communication feature so user can reach out to the world, anywhere, any time.

### Key 3G and 4G Parameters

Attributes	3G	4G
Network Architecture	Wide area Cell based	Hibrid-integration of Wireless Lan (Wi-Fi), Blue Tooth, Wide Area
Major Characteristic	Predominantly voicedata as add-on	Converged data and VoIP
Frequency Band	1.6 - 2.5 GHz	2 - 8 GHz
Bandwidth	5 - 20 MHz	100+ MHz
Data Rate	385 Kbps - 2 Mbps	20 -100 Mbps
Access	WCDMA/CDMA2000	MC-CDMA or OFDM
Switching	Circuit/Packet	Packet
IP	Multiple versions	All IP (IPv6.0)
Operational	~ 2003	~ 2010



## COMPETITIVE COMPARISON: GROUP 1

	Frey Master	Motorola MC40	Honeywell 7800	Intermec CN51
<b>Platform</b>				
<b>Size</b>	6.9 in. x 2.8 in. x 0.8 in. 175 mm x 71.8 mm x 19.5 mm	5.7 in. x 2.9 in. x 0.8 in. 143.9 mm x 72.8 mm x 20.1 mm	6.2 in. x 3 in. x 1.1in. 157 mm x 76 mm x 28 mm	6.1 in. x 3.0 in. x 0.7 in. 164 mm x 74 mm x 28 mm
<b>Keypad</b>	23-key Numeric, plus side FUNC key, volume control keys with LED backlight	-	30-key numeric and 46-key QWERTY	27 Key-Numeric or 43 Key-QWERTY with backlit keypad
<b>Weight</b>	275g / 9.7 oz.	258g / 9.1 oz.	324g / 11.4 oz.	350g / 12.3 oz.
<b>Operating System</b>	Windows 10 IoT Mobile Enterprise or Android 6.0 Marshmallow	Android 11.1	Android 2.3.4	WEH 6.5 or Android 4.1.1
<b>Processor</b>	1.5 GHz, 1.2 GHz Quadcore	800 MHz	800 MHz	1.5 GHz
<b>Memory (RAM/Flash)</b>	2GB / 16GB	1GB / 8GB	256MB / 512MB	1GB / 16GB
<b>Battery</b>	2300mAH (standard) 3450mAH (extended)	2680mAH	2300mAH (standard) 4000mAH (extended)	3900mAh
<b>Battery Swap</b>	Warm battery swap	Warm battery swap	Warm battery swap	Warm battery swap
<b>Display</b>	4.3 in. FHD (1280x720) Works with wet; Works with gloves	4.3 in. HD	3.5 in. HD	4 in. (800 x 480) Works when wet; works with gloves
<b>Communications</b>				
<b>WWAN</b>	4G LTE	-	GSM	GSM, LTE
<b>WLAN</b>	802.11 a/b/g/n/ac	802.11 a/b/g/n/r	802.11 a/b/g/n	802.11 a/b/g/n
<b>Data Capture</b>				
<b>Barcode scanning</b>	1D/2D SE4750	2D	2D	2D
<b>Camera</b>	8 MP Rear	8 MP Rear	3 MP Rear	5 MP Rear
<b>Environmental</b>				
<b>Sealing</b>	IP65	IP54	IP64	IP64
<b>Drop Spec.</b>	5 ft./1.5 m	4 ft./1.2 m	5 ft./1.5 m	5 ft./1.5 m
<b>Operating Temp.</b>	-4°F to 140°F/-20°C to 60°C	32°F to 122°F/ 0°C to 50°C	14°F to 122°F/ -10°C to 50°C	14°F to 122°F/ -10°C to 50°C
<b>Frey Master Advantages</b>				
<p>Use these mini quick reference for a quick at-a-glance view of the advantages of the Frey Master over the primary competitive devices.</p>		<ul style="list-style-type: none"> <li>• Older &amp; slower CPU speed</li> <li>• Older version Android OS</li> <li>• Lower screen display resolution ( and so lower image display quality )</li> <li>• Older version Bluetooth so cost higher power but gives much lower data transfer efficiency</li> <li>• Slower WLAN data speed</li> </ul>	<ul style="list-style-type: none"> <li>• Older &amp; slower CPU speed</li> <li>• Older version Android OS</li> <li>• Much smaller memory capacity so slower processing speed and much lower task capacity</li> <li>• Much smaller screen size, lower screen display resolution ( and so lower image display quality )</li> <li>• Smaller screen display but obviously much larger dimension and much heavier</li> <li>• Slower WLAN data speed</li> <li>• Slower WLAN data speed</li> </ul>	<ul style="list-style-type: none"> <li>• Older &amp; slower CPU speed</li> <li>• Older version Android OS</li> <li>• Lower screen display resolution ( and so lower image display quality )</li> <li>• Smaller screen display but obviously much larger dimension and much heavier</li> <li>• Slower WLAN data speed</li> <li>• Lower camera resolution ( and so lower photo image quality )</li> </ul>

## COMPETITIVE COMPARISON: GROUP 2

	Frey Master	Point Mobile PM66	Honeywell EDA 50K	Janam XM5
<b>Platform</b>				
<b>Size</b>	6.9 in. x 2.8 in. x 0.8 in. 175 mm x 71.8 mm x 19.5 mm	6.5 in. x 3 in. x 1.2 in. 166 mm x 76.8 mm x 29.3 mm	6.5 in. x 2.9 in. x 1 in. 164 mm x 73 mm x 24.5 mm	6.2 in. x 3.0 in. x 1 in. 156.9 mm x 75.6 mm x 25.8 mm
<b>Keypad</b>	23-key Numeric, plus side FUNC key, volume control keys with LED backlight	Numeric keypad (24 Keys) with backlight	26-key numeric main keypad	Numeric keypad ( 27-key ) or QWERTY ( 47-key )
<b>Weight</b>	275g / 9.7 oz.	300g / 9.8 oz.	426g / 10.6 oz.	305g / 10.8 oz.
<b>Operating System</b>	Windows 10 IoT Mobile Enterprise or Android 6.0 Marshmallow	Android 6.0.1 Marshmallow	Android 4.4 KitKat	WEH 6.5 or Android 4.2
<b>Processor</b>	1.5 GHz, 1.2 GHz Quadcore	1.4 GHz quad core	1.2 GHz quad core	1 GHz
<b>Memory (RAM/Flash)</b>	2GB / 16GB	2GB / 16GB	2GB / 8GB	512MB / 1GB
<b>Battery</b>	2300mAh (standard) 3450mAh (extended)	4000mAh	4000mAh	4000mAh
<b>Battery Swap</b>	Warm battery swap	Warm battery swap	Warm battery swap	Warm battery swap
<b>Display</b>	4.3 in. FHD (1280x720) Works with wet; Works with gloves	4.3 in. Works when wet; Works with gloves	4 in. HD Works when wet; Works with gloves	3.5 in. (480 x 640)
<b>Communications</b>				
<b>WWAN</b>	4G LTE	GSM, LTE	GSM, LTE	GSM
<b>WLAN</b>	802.11 a/b/g/n/ac	802.11 a/b/g/n	802.11 a/b/g/n	802.11 a/b/g/n
<b>Data Capture</b>				
<b>Barcode scanning</b>	1D/2D SE4750	1D/2D	2D	2D
<b>Camera</b>	8 MP Rear	13 MP Rear	5 MP Rear	5 MP Rear
<b>Environmental</b>				
<b>Sealing</b>	IP65	IP67	IP54	IP65
<b>Drop Spec.</b>	5 ft./1.5 m	5 ft./1.5 m	4 ft./1.2 m	5 ft./1.5 m
<b>Operating Temp.</b>	-4°F to 140°F/-20°C to 60°C	-4°F to 140°F/-20°C to 60°C	14°F to 122°F/-10°C to 50°C	-4°F to 140°F/-20°C to 60°C
<b>Frey Master Advantages</b>				
<p>Use these mini quick reference for a quick at-a-glance view of the advantages of the Frey Master over the primary competitive devices.</p>		<ul style="list-style-type: none"> <li>Lower screen display resolution ( and so lower image display quality )</li> <li>Same display size but obviously much wider and thicker, heavier</li> <li>Slower WLAN data transfer speed</li> </ul>	<ul style="list-style-type: none"> <li>Older version Android OS</li> <li>Smaller F-ROM size ( so lower task capacity )</li> </ul>	<ul style="list-style-type: none"> <li>Much older and slower CPU version</li> <li>Much smaller memory capacity</li> <li>Much smaller display size and lower display resolution ( so does lower display image quality )</li> <li>Smaller display size but obviously much wider and thicker, heavier</li> <li>Lower camera resolution ( so does lower photo image quality )</li> <li>Older Bluetooth version ( so lower data transfer efficiency )</li> <li>Slower WLAN data transfer speed</li> </ul>