

F8 Keyboard

128 key compact programmable keyboard



TECHNICAL OVERVIEW

Description and Application

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[**TIPRO**]

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A. GENERAL INFORMATION

TIPROs 128-key F8 Keyboard is a new keyboard with a compact footprint. It has both USB and PS/2 interface.

It is programmable like all other Tipro modules.

Switching between USB and PS/2 interface is done by simply connecting the respective cable. Our ChangeMe software takes care that both USB and PS/2 key events are programmed.

A.1. Highlights

FEATURES

- ◆ programmable
- ◆ mechanical keys (Cherry MX)
- ◆ ergonomic tactile feedback for frequent/intensive typing
- ◆ various keycap sizes and colours
- ◆ customizable key inscriptions (pad printing) and contents/codes
- ◆ robust and durable

CONCEPT

- ◆ open-standard interfaces
- ◆ supported by generic HID keyboard drivers
- ◆ versatile and upgradeable

PROGRAMMABILITY

- ◆ each key can be programmed with up to four (4) different contents (layers)
- ◆ enable/disable function for individual keys and key combinations
- ◆ different access levels protected by passwords (see Reference [2])
- ◆ all settings permanently stored in internal non-volatile memory of the controller

A.2. Technical Characteristics

ELECTRICAL

- ◆ **power supply:** 5V±5% (from primary USB or PS/2 interface)
- ◆ **current consumption:** 35 mA_{TYP} (maximum: 90 mA)

ENVIRONMENTAL

- ◆ **operating ambient temperature range:** 0°C to +40°C
- ◆ **storage ambient temperature range:** -10° C to +50°C
- ◆ **relative humidity range:** 20% to 80% (non-condensing)

MECHANICAL

- ◆ **casing:** plastic ABS
- ◆ **dimensions:** 350 × 174 × 48 mm. (WxDxH)
- ◆ **weight:** 1.2 kg.
- ◆ **protection (sealing) grade:** IP 30 (according to EN 60529)
- ◆ **packaging dimensions:** 380 x 190 x 60 mm.
- ◆ **weight including packaging:** 1.4 kg.

MECHANICAL KEYS

- ◆ **keyswitch**
 - model: Cherry MX
 - actuation: linear
 - key travel: 3.6mm to 4.0mm total, (2 ± 0.6) mm pre-travel
 - actuating force: (60 ± 20) cN
 - reliability (Mean Cycles To Failure): MCTF = 1 billion (10⁹) press/release cycles (50 million is guaranteed minimum)
- ◆ **keycaps**
 - construction: separate body and cover
 - keycap covers: printed (transparent available)

A.3. Ordering Code

Compact Footprint Keyboard

F	8	Q	-	C	-	-	-
1	2	3		4			5

- 1 Compact Keyboard
- 2 Keyboard size
8: max. 128 keyswitches
- 3 Matrix Arrangement
Q: staggered qwerty layout down (5 rows)
X: xy matrix
- 4 Housing Colour
C15: Standard (black housing)
- 5 Custom Version (optional)

B. MODULES

B.1. Keyboard Module

The Keyboard module has 128 keys arranged into eight (8) rows and 16 columns with a staggered Qwerty layout (in the lower five rows). By default the three upper rows of keys are furnished with single keycaps and transparent keycap covers. The lower 5 rows with QWERTY layout have black keycaps with printed legends.

The Keyboard utilizes Cherry MX mechanical keyswitches with a long travel and an ergonomic force feedback suitable for frequent typing. Keycaps are available in different sizes (single, double horizontal, double vertical, quadruple) and colours.



A special key arrangement arranged into eight (8) rows and 16 columns is possible. By default all keys are furnished with single keycaps and transparent keycap covers:



B.2. Controller

The Tipro Controller is an integral part of the keyboard. The controller provides a USB and/or PS/2 interface to the host system (computer).

FEATURES

- ◆ supported by generic drivers
- ◆ pre-programmed custom key-content
- ◆ all keys freely programmable
- ◆ “Protect” function (provides several access levels/security) can be implemented
- ◆ programmable with ChangeMe software
- ◆ status LEDs
 - Caps Lock
 - Num Lock
 - Scroll Lock
- ◆ four LEDs for layer indication

B.2.1. Technical Characteristics

CONTROLLER EEPROM:

- ◆ **capacity** : 64kB
- ◆ **endurance** : 1 million write/erase cycles
- ◆ **data retention** : 100 years

B.3. Interface Cable

The necessary USB cable is included in the configuration. (PS/2 cable to be ordered separately)

USB CABLE

- ◆ **length**: 2.5 m
- ◆ **controller side connector**: USB B plug (male)
- ◆ **host side connector**: USB A plug (male)

C. ACCESSORIES

C.1. USB Cable

Ordering code: TM-CU1-001

C.2. PS/2 Cable

Ordering Code: TM-CMA

D. REFERENCES

1. “ChangeMe” – User’s Manual
2. “Protect Function” – Application Note

E. NOTICES

E.1. Disclaimer

Information furnished by Tipro is believed to be accurate and reliable. However, Tipro makes no representations or warranties regarding the accuracy or completeness of the contents of this document and reserves the right to make changes to specifications and product descriptions at any time without notice.

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