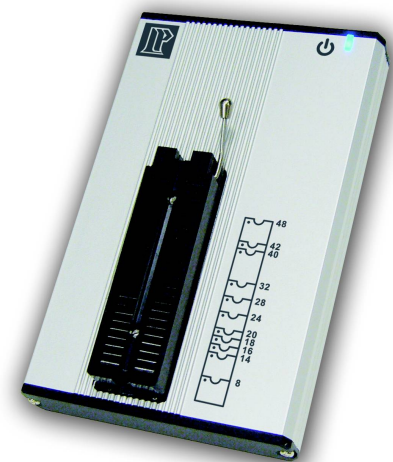


LEAPER – 56

Pocket Universal Programmer
Extreme Speed & Mobility & Stability!



力浦電子實業股份有限公司
LEAP ELECTRONIC CO., LTD.

Leaptronix®

INSTRUMENT

Basic Data of LEAP Electronic Taiwan

Company:	Leap Electronic Co., Ltd.
Date Of Foundation:	Feb. 1, 1980
Number Of Employees:	80 persons
Brand:	LP, LEAP, LEAPTRONIX
Product Origin:	Taiwan
Location:	New Taipei City, Taiwan



Quality Certificate



Core Values

1. Minimize the size of equipment & instruments — maximize working space & efficiency.
2. User-friendly — all of the design of hardware & software comes with simplicity of operation.
3. Innovative and dedicated R&D culture.
4. Professional and comprehensive customer services.

Product Range

- **Automated Equipment -**
Automated Programmers & Customized Handlers
- **Factory Automation -**
Robotic Arms
- **Manual Programmer -**
Gang 8, Gang 4, Single Site Programmers
- **Educational Equipment -**
FPGA/RFID/MCU Trainers, IC Testers
- **Test Instrument -**
Logic Analyzer, Impulse Winding Tester, Power Supply

LEAP's Partners

- Foxconn



- Quanta



- LG



- Chimei

CHIMEI

- Skyworth



- Prima



- MSI



- Flatek



- Calcomp



- DJI



- Sanyu Denki

SANYODENKI

- Innocom



- Lite on



- Compal



- Asustek



- Silitech



- Regent Manner



- GBM



- Wistron



- Mobiletron



- NMB



- SMTT



High Mobility With No Power Adapter Needed



LEAPER-56

Pocket Universal Programmer
Best Choice for Engineering & Education Purposes

- Smallest dimension and weight that will be not reached by others at **136 (L) x 90 (W) x 20 (H)mm , 282g**
- Simply **Powered by Dual USB** ports, providing highest mobility & easiest operation for engineering requirements.

Comparison of Commercially Available Programmers

Comparison of Dimension

Hi-Lo All-100/All-100P 260x150x100mm, 4kg

Xeltek SuperPro-3000 240x150x50mm, 2.73kg

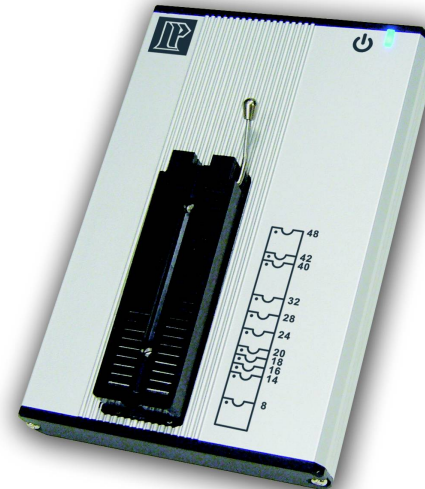
LEAP SU-600 235x115x65mm, 1.5kg

SystemGeneral T-9600 200x145x103mm, 2.4kg

Elneec BeeProg+ 195x140x55mm, 0.9kg

LEAP LEAPER-56 135x90x20mm, 0.29kg

iPhone 6



Comparison of Profile Dimension

Hi-Lo
All-100/All-100P
260x150x100mm
4kg

SystemGeneral T-9600 200x145x103mm, 2.4kg

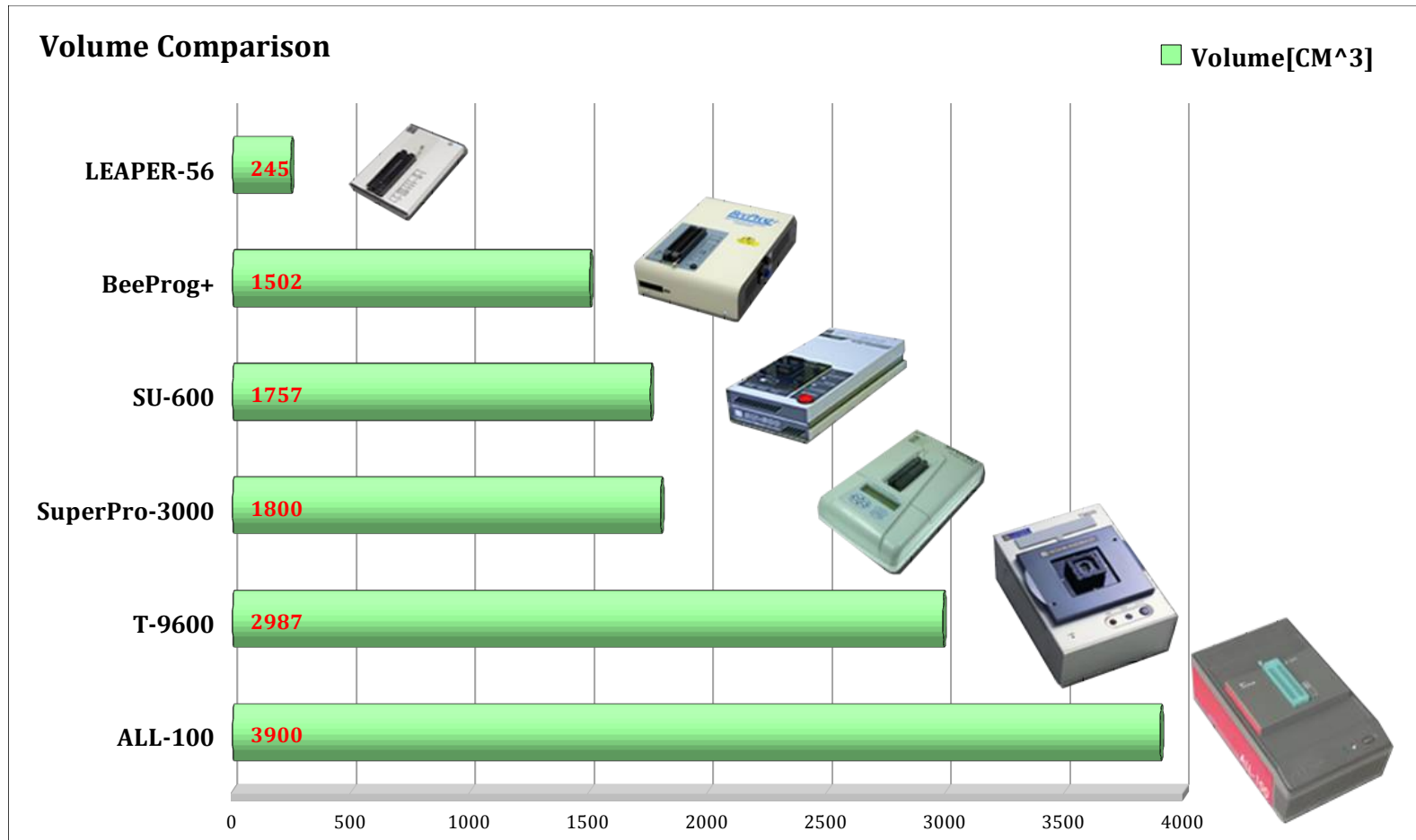
LEAP SU-600 235x115x65mm, 1.5kg

Xeltek
SuperPro-3000
240x150x50mm
2.73kg

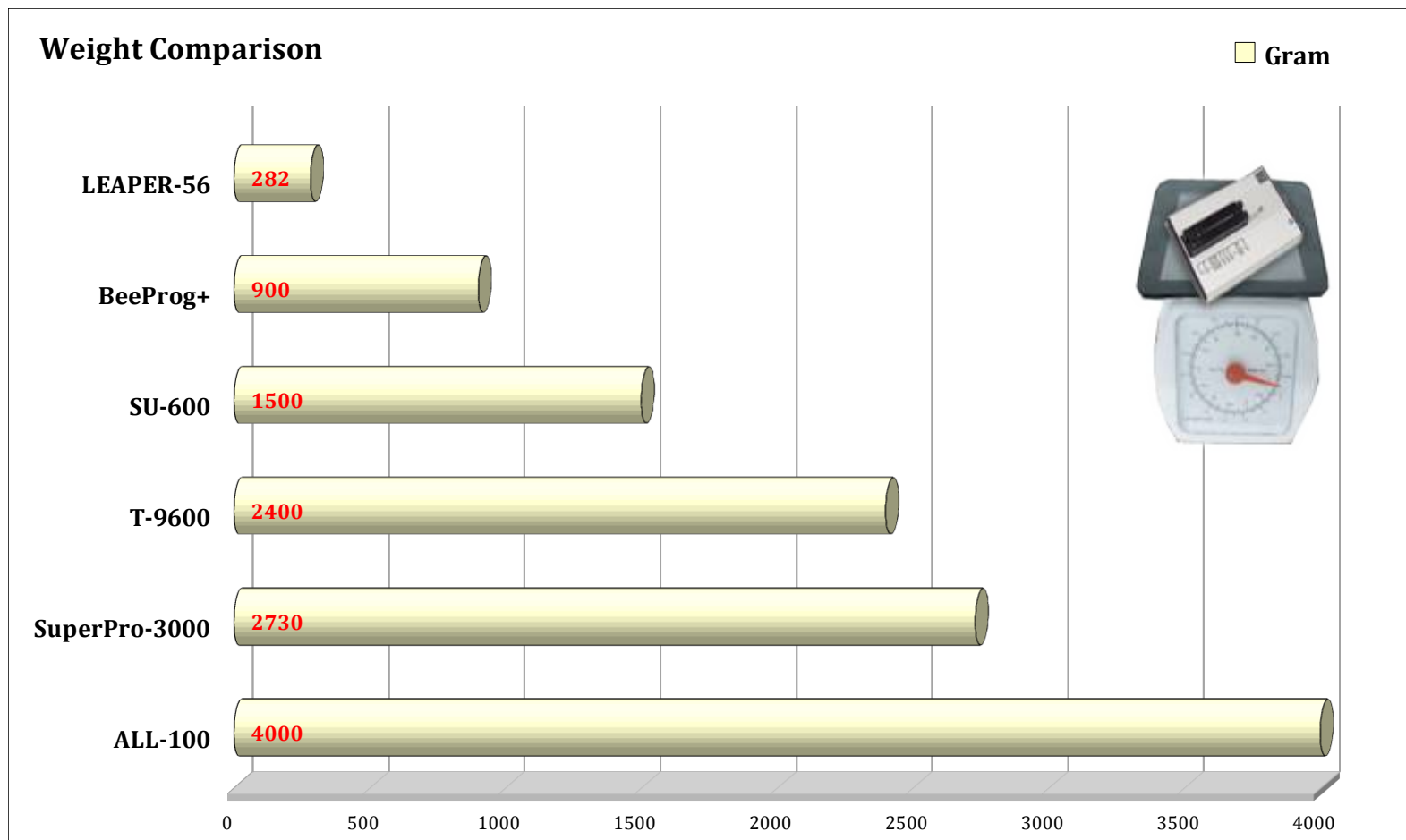
Elneec BeeProg+ 195x140x55mm, 0.9kg

LEAP LEAPER-56 135x90x20mm, 0.29kg

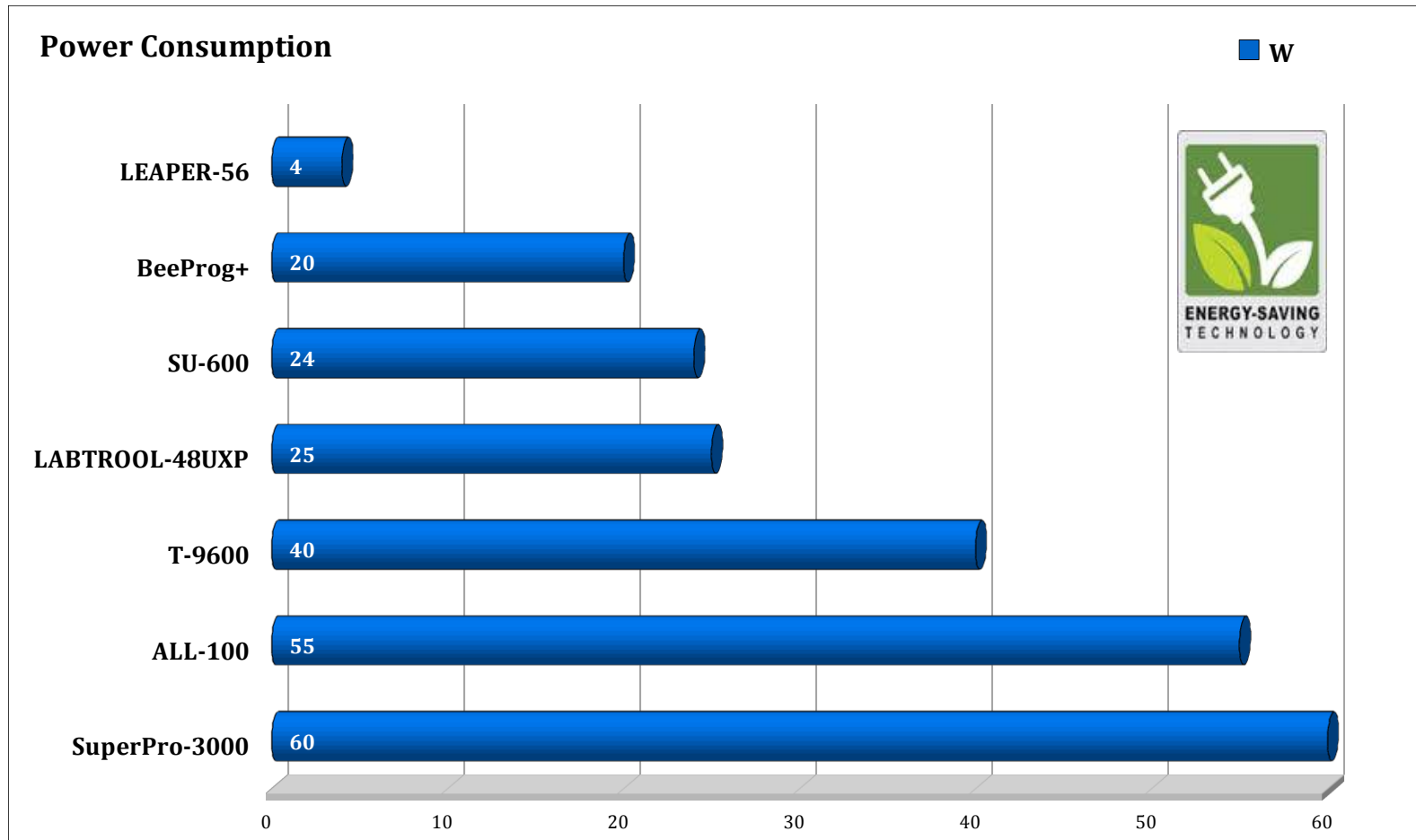
Comparison of Commercially Available Programmers



Comparison of Commercially Available Programmers

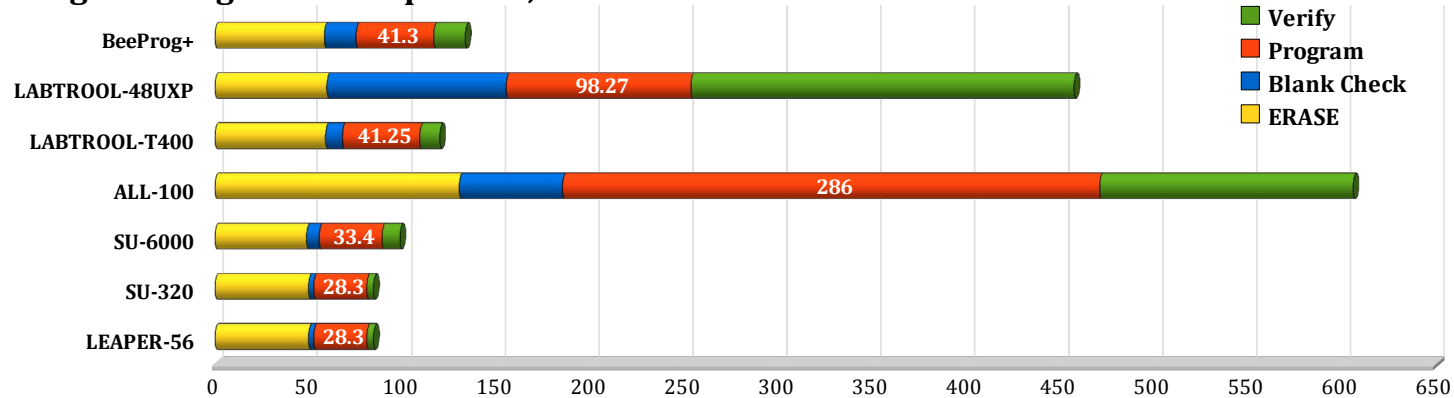


Comparison of Commercially Available Programmers



Programming Performance ST-M25P64

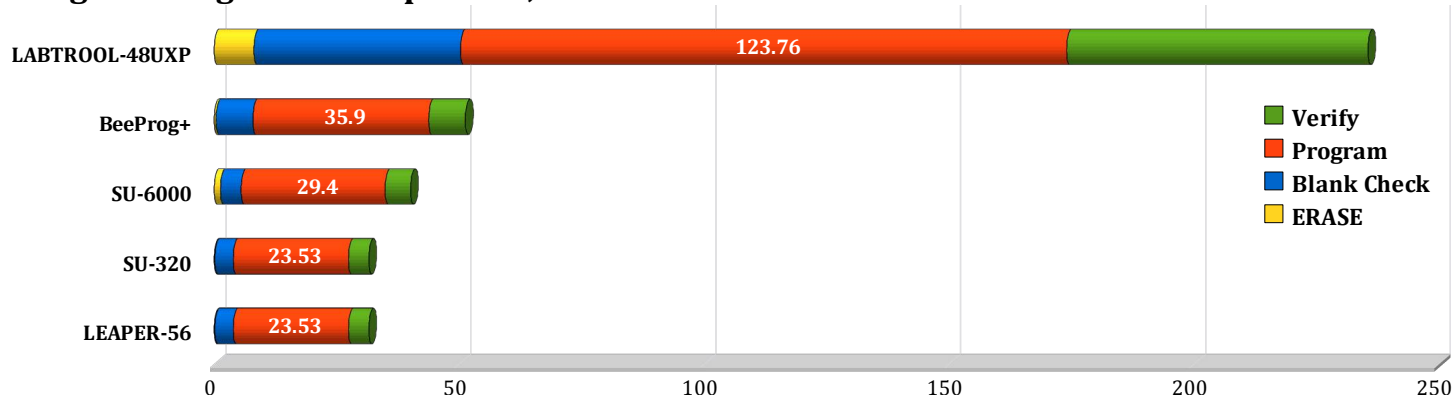
Programming Time Comparison, Unit: Second



Test Device	Items	LEAP LEAPER-56	LEAP SU-320	LEAP SU-6000	HILO ALL-100	Advantech LabTool-T400	Advantech LabTool-48UXP	ELNEC BeeProg+
ST M25P64 64M SPI Flash	ERASE	49.8	49.8	48.75	130	58.85	59.55	58.2
	Blank Check	2.73	2.73	6.75	55	8.95	95.54	16.9
	Program	28.3	28.3	33.4	286	41.25	98.27	41.3
	Verify	3.6	3.6	9.59	135	10.62	204	16.9
	Total(P+V)	31.9	31.9	42.53	421	51.87	302.27	58.2
	Total(E+P+V)	81.7	81.7	90.8	476	110.78	361.82	116.4

Programming Performance SST-25VF032B

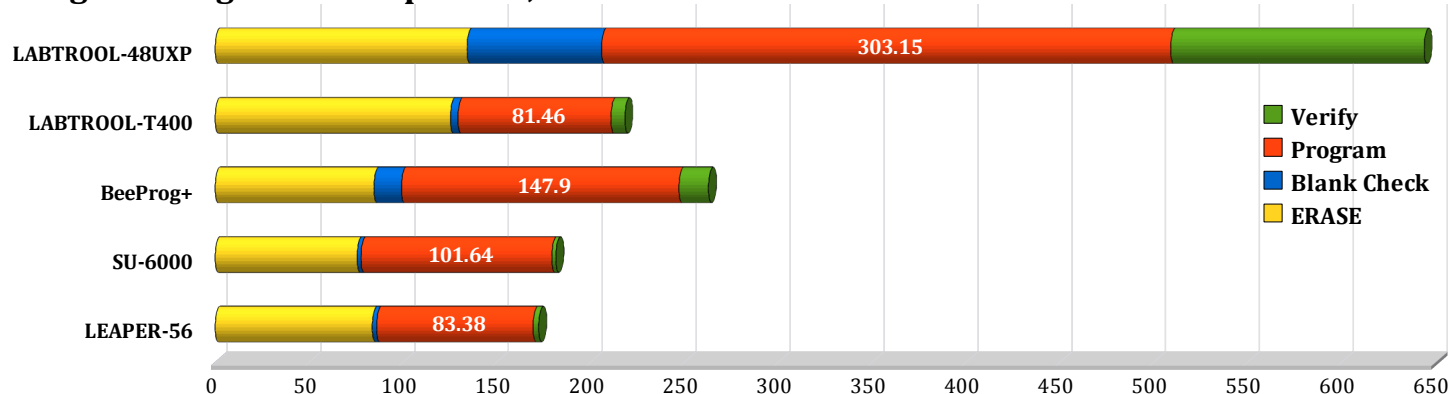
Programming Time Comparison, Unit: Second



Test Device	Items	LEAP LEAPER-56	LEAP SU-320	LEAP SU-6000	ELNEC BeeProg+	Advantech LabTool-48UXP
SST 25VF032B	ERASE	0.14	0.14	1.28	0.4	8.11
	Blank Check	3.75	3.75	4.25	7.5	42.21
	Program	23.53	23.53	29.4	35.9	123.76
	Verify	4.14	4.14	5.16	7.5	61.51
	Total(P+V)	27.67	27.67	34.56	43.40	185.27
	Total(E+P+V)	27.81	27.81	35.84	43.80	193.38

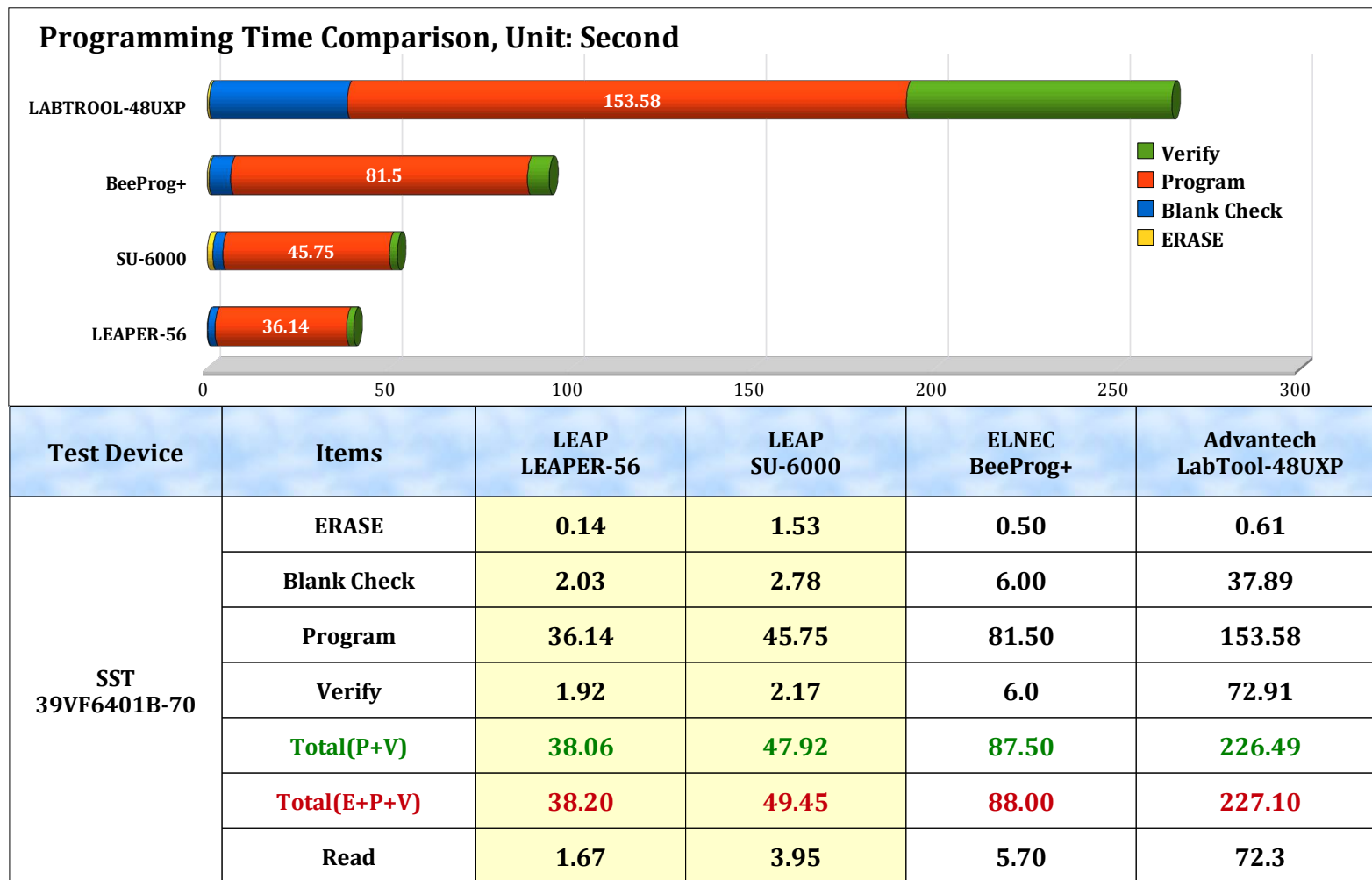
Programming Performance Mxic-MX29LV128DB

Programming Time Comparison, Unit: Second



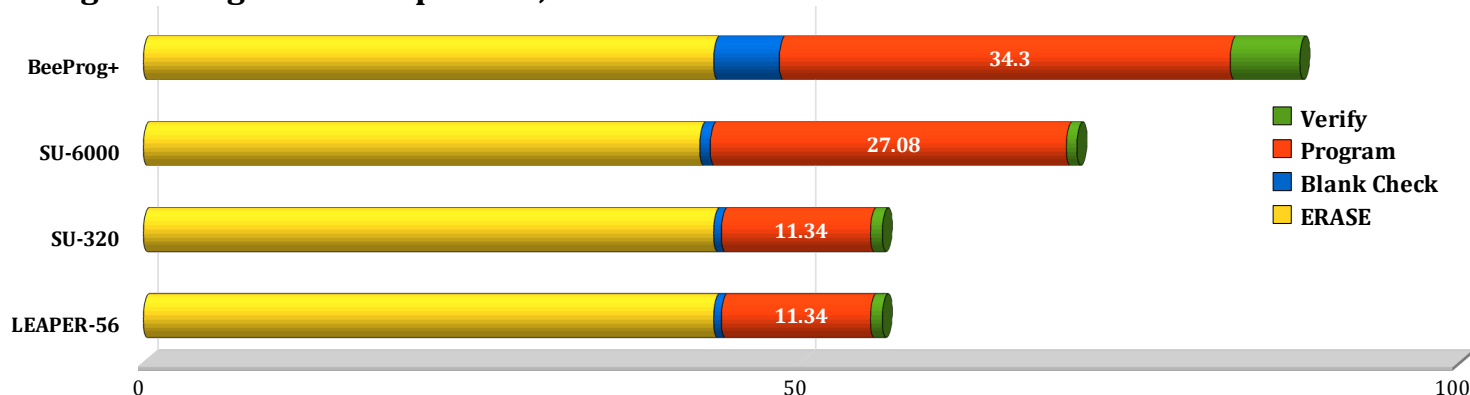
Test Device	Items	LEAP LEAPER-56	LEAP SU-6000	ELNEC BeeProg+	Advantech LabTool-T400	Advantech LabTool-48UXP
MXIC MX29LV128DB 128M NOR FLASH	ERASE	83.75	75.58	84.60	125.28	134.18
	Blank Check	2.27	2.14	14.60	4.09	71.71
	Program	83.38	101.64	147.90	81.46	303.15
	Verify	2.94	2.14	15.70	7.45	135.03
	Total(P+V)	86.31	103.78	163.60	88.91	438.18
	Total(E+P+V)	170.06	179.36	248.20	214.19	572.36
	Read	2.10	2.14	14.40	8	130

Programming Performance SST-39VF6401B-70



Programming Performance ATMEL-AT49BV322A

Programming Time Comparison, Unit: Second



Test Device	Items	LEAP LEAPER-56	LEAP SU-320	LEAP SU-6000	ELNEC BeeProg+
ATMEL AT49BV322A 32M NOR FLASH	ERASE	43.39	43.39	42.34	43.40
	Blank Check	0.59	0.59	0.81	5.00
	Program	11.34	11.34	27.08	34.30
	Verify	0.91	0.91	0.81	5.30
	Total(P+V)	12.25	12.25	27.89	39.60
	Total(E+P+V)	55.64	55.64	70.23	83.00
	Read	0.80	0.80	0.81	4.90

Powerful Specifications

- Universal Built-in Pin Drive : **48 Pins**
- Signal Pin Drive Voltage Range : **1.50V – 6.00V (10mV)**
- Signal Pin Drive IOL, IOH Current : **10mA**
- Signal Pin Drive Bandwidth : **75MHz (3.0-5.0V)**
60MHz (2.5V)
33MHz (1.8V)
25MHz (1.5V)
- Signal Pin Drive All Channel Skew : **< ± 2.2nS (3.0-5.0V)**
- Clock Frequency Range : **0Hz ~ 75MHz**

Powerful Specifications

● VDD / VIO Pin Drive Voltage Range : **1.50V – 6.50V (10mV)**

VDD / VIO Pin Drive Current Supply : **400mA**

● VPP / VHH Pin Drive Voltage Range : **1.50V – 15.00V (20mV)**

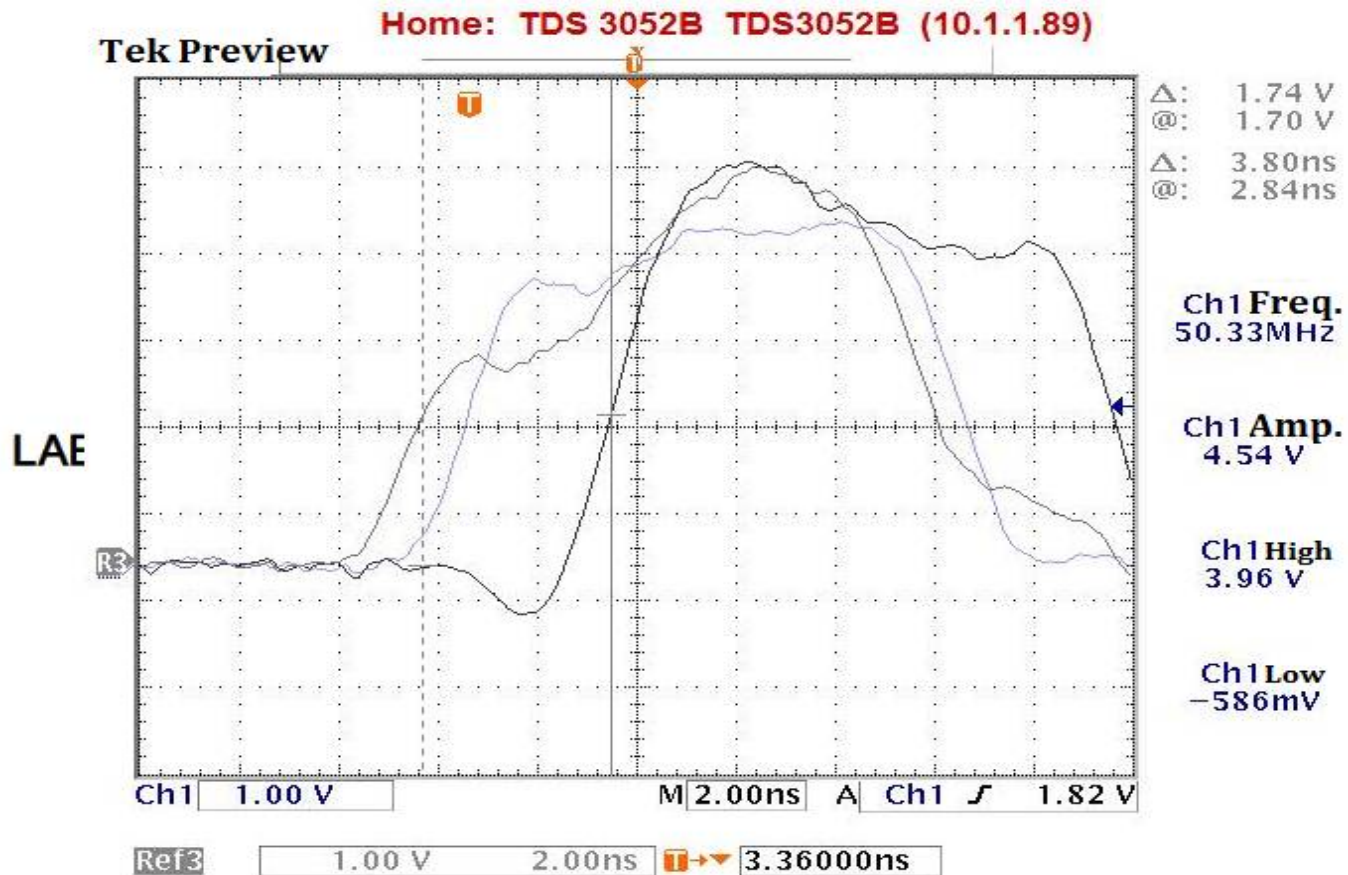
VPP / VHH Pin Drive Current Supply: **150mA**

● GND Pin Drive Current Supply : **300mA / 400mA**

AC Operating Characteristics

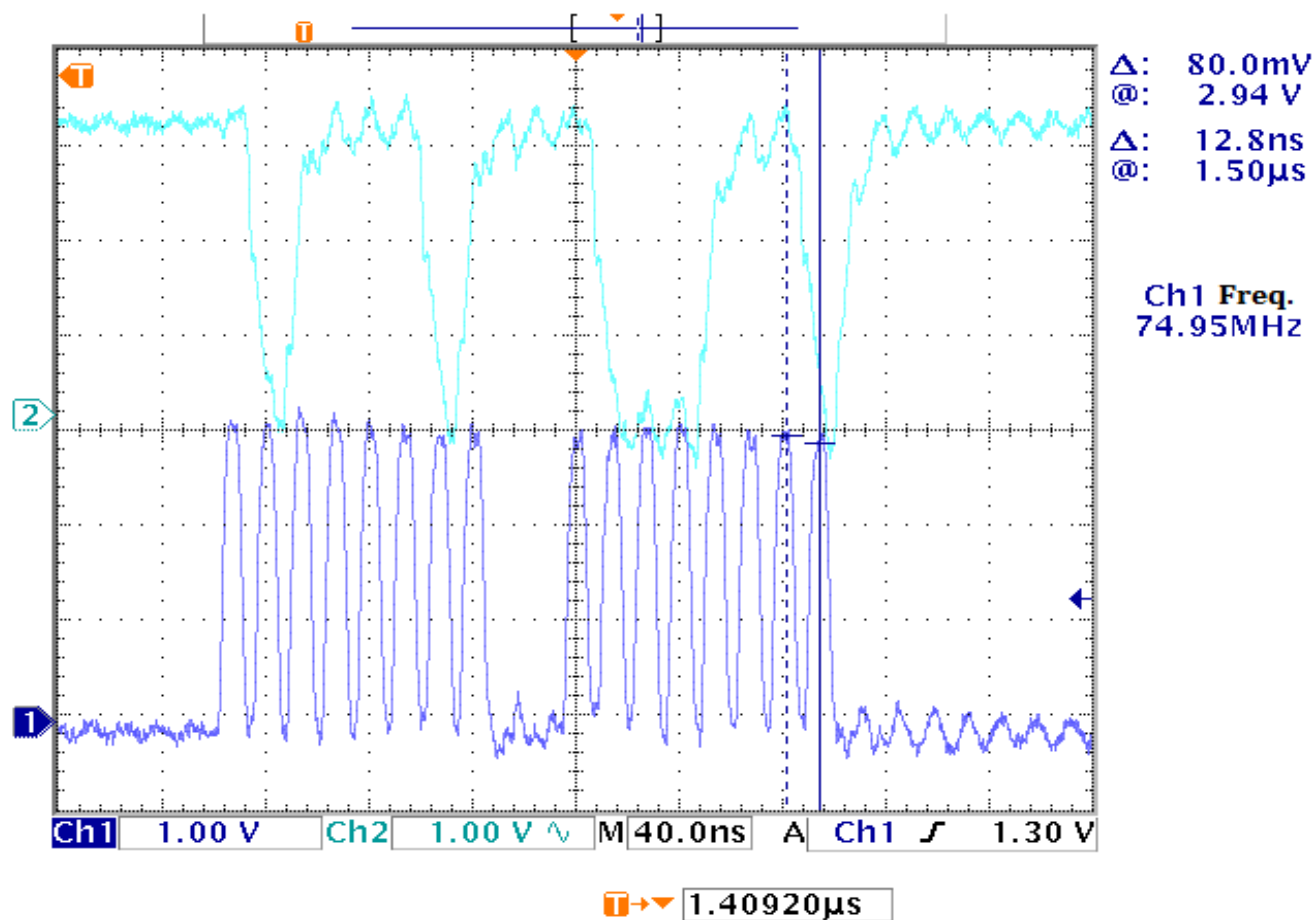
Signal Pin Drive Skew :

48 Pin Signal fastest and slowest output & the time difference at **3.8 nS**.



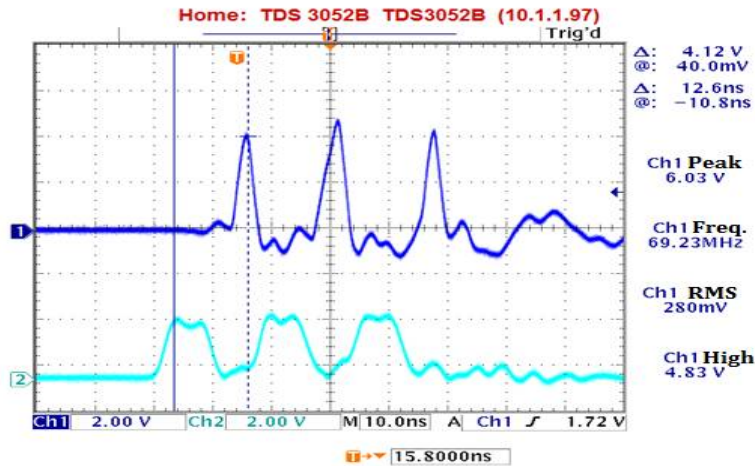
AC Operating Characteristics

SPI FLASH Read Waveform

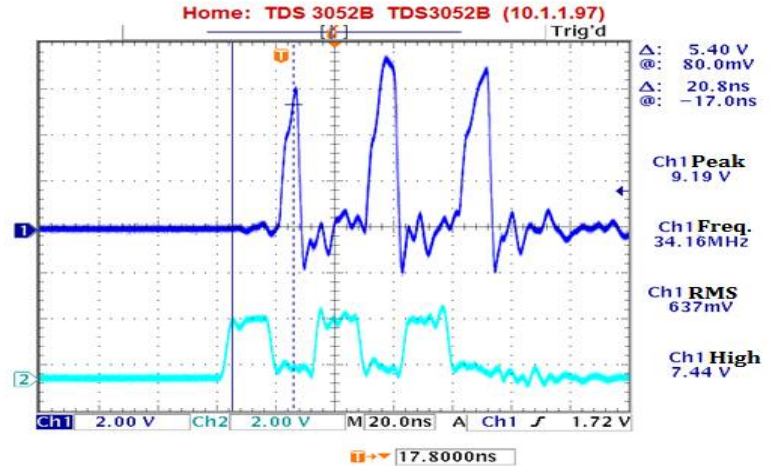


AC Operating Characteristics

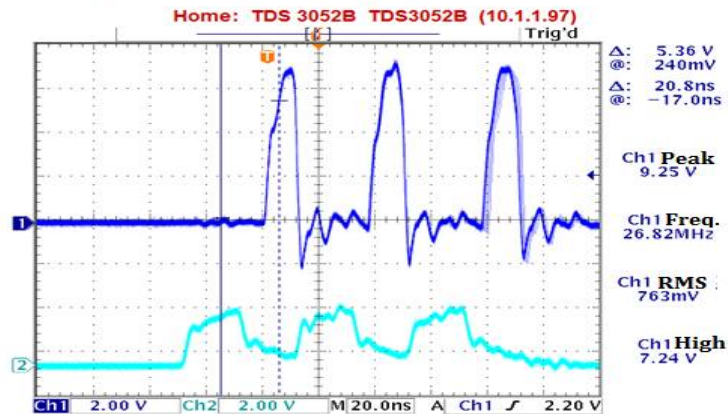
62MHz 2.5V Logic Signal



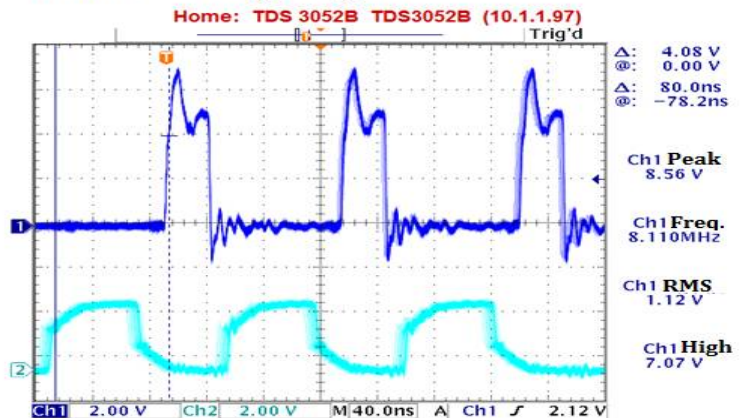
33MHz 1.8V Logic Signal



25MHz 1.5V Logic Signal

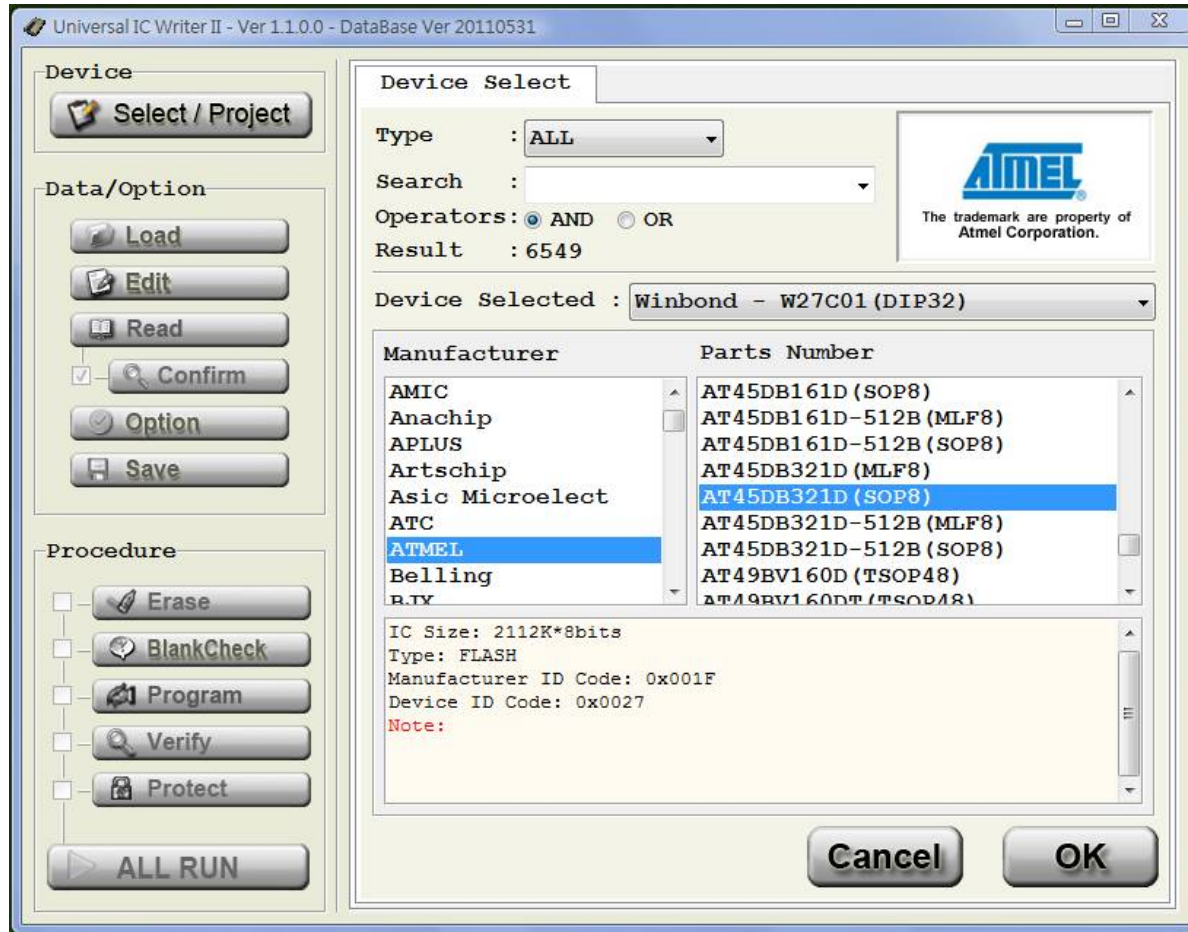


8MHz 1.2V Logic Signal



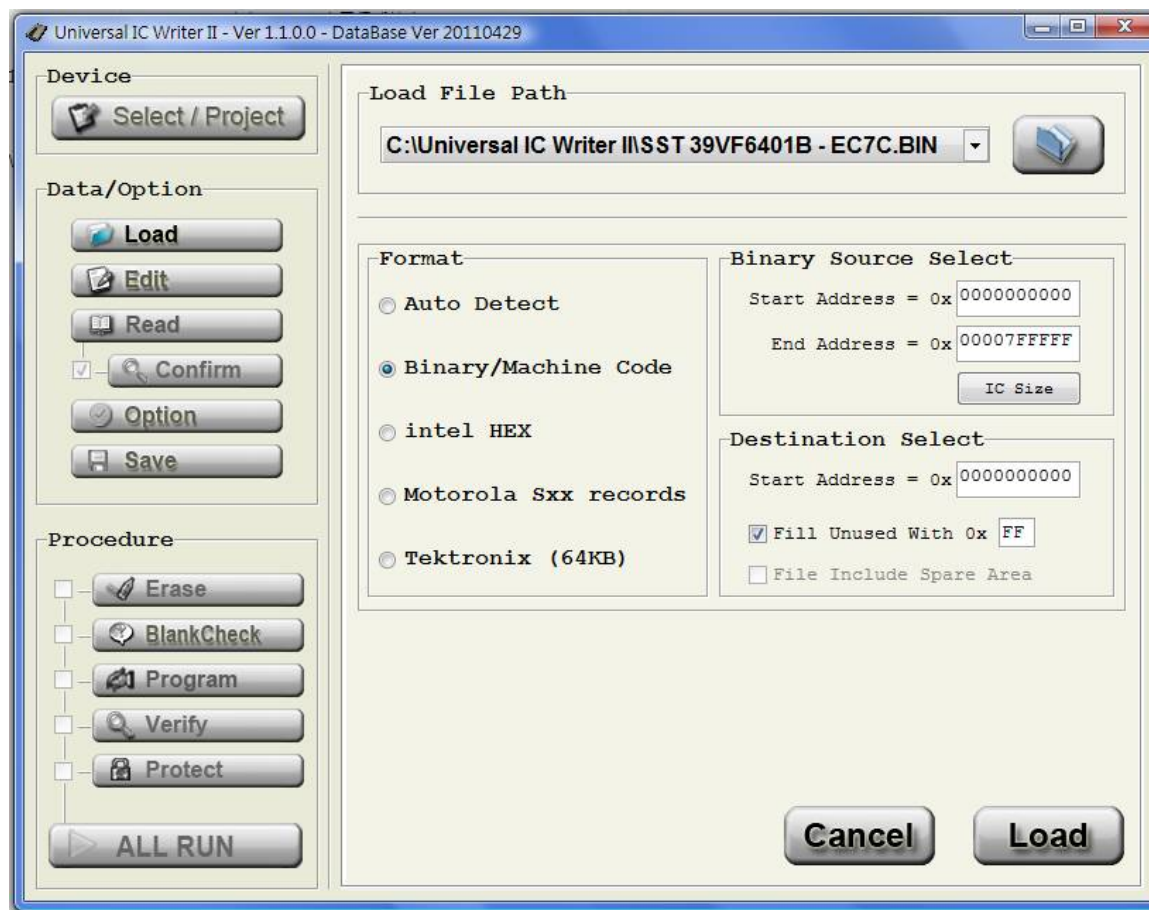
User-Friendly UI

● Simplified Part Number Selection



User-Friendly UI

File Loading



User-Friendly UI

One Click For All Procedures



Why Choose LEAP?

1. Immediate Support:

LEAP products come with full warranty within its period and LEAP's strong engineering background never fails to **solve immediately any problems** you might encounter.

2. Cost-Effective Solutions:

LEAP offers customized solutions that are most suitable for every customer to meet their requirements **at the lowest costs**.

3. Free & Regular Device Updating:

LEAP has long been in close relationship with IC makers, and offers quickest device updating & best programming methods/algorithm **FOR FREE**. Device List is updated on a Daily Basis.

Thanks!