

# OTP VOICE TOOL LIST

## aP89 Family List ( Page 2 – 6 )

Part No.	Demo Board	Development Tools		
		1 Pce. Writer	8 Pcs. Copier	SOP Adaptor
aP89010	aP89XS_DB20P aP89XX_DBTR20	aP89W24USB	aP89C16-M2	16S-D2
aP89021				
aP89042				
aP89085	aP89XS_DB24P aP89XX_DBAMP		aP89C24-DIP aP89C24-SOP	28S-24D
aP89170				
aP89341				
aP8910A	aP89XS_DB20A aP89XX_DBTR20A		aP89C16A-M2	16S-D2
aP8921A				
aP8942A				

## aIVR Family List ( Page7 – 12 )

Part No.	Demo Board	Development Tools			
		1 Pce. Writer	8 Pcs. Copier	SOP Adaptor	
aIVR1004	aIVRDBS aIVRDB16	aIVR20W	aIVR20C8-DIP aIVR20C8-SOP16	TEXTTOOL-16 16S-D2	
aIVR2104					
aIVR4208					
aIVR8511	aIVRDBS aIVRDBT		aIVR20C8-DIP aIVR20C8-SOP20	20S-D	
aIVR341N	341NDBS		aIVR20C8-DIP aIVR20C8-SOP20 aIVR20C8-SOP24	20S-D 24S-D	
aIVR3K10	3KDBDS 3KDBDN		aIVR3KWS-U	AIVR3KC8-DIP AIVR3KC8-SOP8	3K8S-16D
aIVR3K21					
aIVR3K42				AIVR3KC8-DIP AIVR3KC8-SOP14	3K8S-16D 3K14-16D




## MTP List( Page13 - 14)

Part No.	Demo Board	Development Tools	
		1 Pce. Writer	Program Board
aMTP32M	DBMFL-STD2	aSPI28W	DBMFL-ENG2-DIP DBMFL-ENG2-SOP

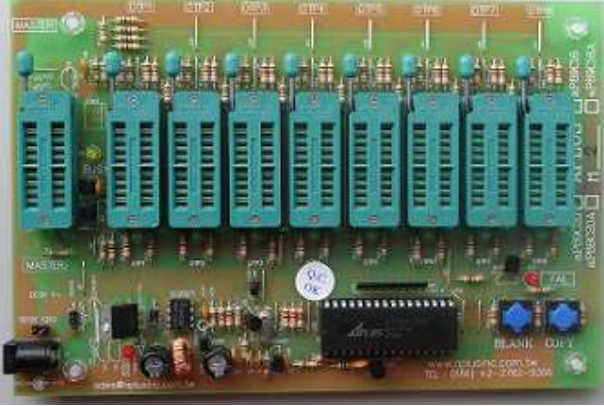
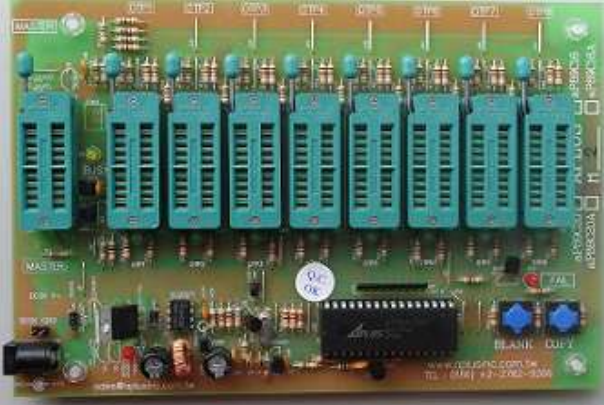
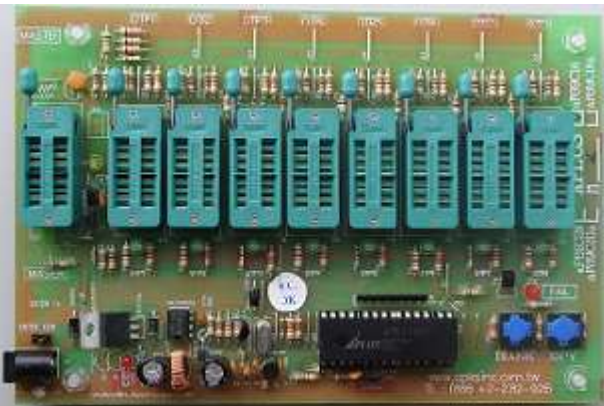
## Recording list(Page 15-17)

Part No.	Demo Board
aPR33A3	aPR33A3DB-C1.1S/F, aPR33A3DB-C2.1S/F, aPR33A3DB-C3.1S/F
aPR2060	aPR2060DBS-T2.2, aPR2060DBS-K2.1, aPR2060DBC-H2.2

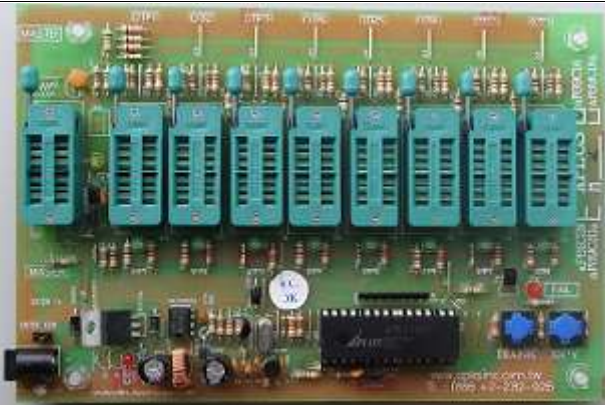

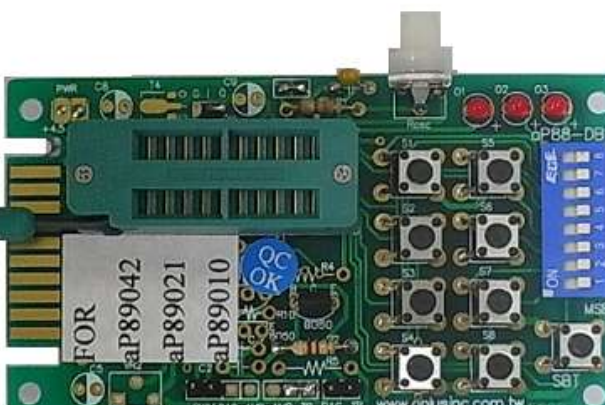
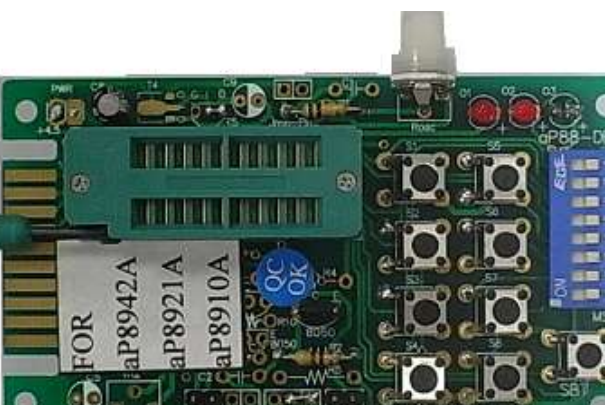
# OTP VOICE TOOL LIST

TOOL BOARD	DESCRIPTION
	<ol style="list-style-type: none"> <li>1. PART NO. : <b>aP89W24USB</b></li> <li>2. Writer For <b>aP89341/89170/89085/89042 89021/89010/8942A /8921A/8910A DIP</b></li> <li>3. PCB SIZE : 135 x 117 mm</li> <li>4. POWER : <b>USB 5V</b></li> <li>5. Attachment : USB cable,&amp; CD( software ) &amp; user manual</li> </ol>
	<ol style="list-style-type: none"> <li>1. PART NO. : <b>aP89C24-DIP</b></li> <li>2. Copier For <b>aP89341/aP89170/aP89085 DIP</b></li> <li>3. PCB SIZE : 241 x 127 mm</li> <li>4. POWER : <b>DC-JACK 5V / 1A</b></li> <li>5. Attachment : Adapter 5V/1A &amp; user manual</li> </ol>
	<ol style="list-style-type: none"> <li>1. PART NO. : <b>aP89C24-SOP</b></li> <li>2. Copier For <b>aP89341/aP89170/aP89085 SOP</b></li> <li>3. PCB SIZE : 241 x 127 mm</li> <li>4. POWER : <b>DC-JACK 5V / 1A</b></li> <li>5. Attachment : Adapter 5V/1A &amp; user manual</li> </ol>



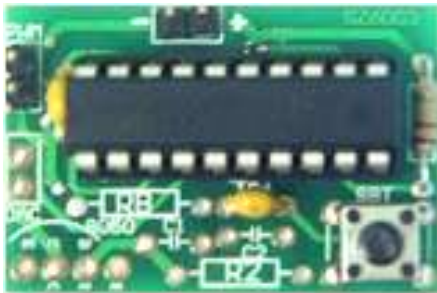

# OTP VOICE TOOL LIST

TOOL BOARD	DESCRIPTION
	<ol style="list-style-type: none"> <li>1. PART NO. : <b>aP89C20-M2</b></li> <li>2. Copier For <b>aP89042 DIP</b></li> <li>3. PCB SIZE : 182 x 121 mm</li> <li>4. POWER : <b>DC-JACK 5V / 1A</b></li> <li>5. Attachment : Adapter 5V/1A &amp; user manual</li> </ol>
	<ol style="list-style-type: none"> <li>1. PART NO. : <b>aP89C20A-M2</b></li> <li>2. Copier For <b>aP8942A DIP</b></li> <li>3. PCB SIZE : 182 x 121 mm</li> <li>4. POWER : <b>DC-JACK 5V / 1A</b></li> <li>5. Attachment : Adapter 5V/1A &amp; user manual</li> </ol>
	<ol style="list-style-type: none"> <li>1. PART NO. : <b>aP89C16-M2</b></li> <li>2. Copier For <b>aP89021/ aP89010 DIP</b></li> <li>3. PCB SIZE : 182 x 121 mm</li> <li>4. POWER : <b>DC-JACK 5V / 1A</b></li> <li>5. Attachment : Adapter 5V/1A &amp; user manual</li> </ol>




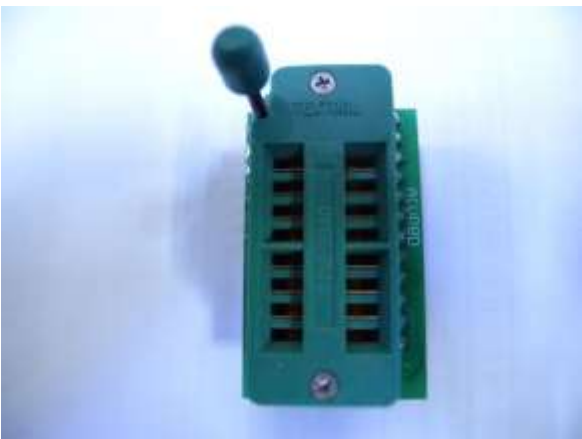
# OTP VOICE TOOL LIST

TOOL BOARD	DESCRIPTION
	<ol style="list-style-type: none"> <li>1. PART NO. : <b>aP89C16A-M2</b></li> <li>2. Copier For aP8921A/ aP8910A DIP</li> <li>3. PCB SIZE : 182 x 121 mm</li> <li>4. POWER : <b>DC-JACK 5V / 1A</b></li> <li>5. Attachment : Adapter 5V/1A &amp; user manual</li> </ol>
	<ol style="list-style-type: none"> <li>1. Part No. : <b>aP89XX_DBAMP</b></li> <li>2. Demo Board for aP89341/aP89170/aP89085 DIP (<b>AMP - 24 PIN DEMO BOARD</b>)</li> <li>3. PCB SIZE : 76 X 45 mm</li> <li>4. VCC = <b>4.5V</b></li> <li>5. DAC-TR/DAC-AMP / PWM select</li> <li>6. SAMPLE rate &amp; Volume adjust</li> <li>7. KEY /CPU parallel mode select</li> <li>9. LED enable/disable, POWER ON reset</li> </ol>
	<ol style="list-style-type: none"> <li>1. Part No. : <b>aP89XX_DBTR20</b></li> <li>2. Demo Board for aP89042/aP89021/ aP89010 DIP</li> <li>3. PCB SIZE : 87 x 48 mm</li> <li>4. VCC = <b>4.5V</b></li> <li>5. DAC / PWM select</li> <li>6. SAMPLE rate adjust</li> <li>7. KEY /CPU parallel mode select</li> <li>9. LED enable/disable</li> </ol>
	<ol style="list-style-type: none"> <li>1. Part No. : <b>aP89XX_DBTR20A</b></li> <li>2. Demo Board for aP8942A/aP8921A/ aP8910A DIP</li> <li>3. PCB SIZE : 87 x 48 mm</li> <li>4. VCC = <b>4.5V</b></li> <li>5. DAC / PWM select</li> <li>6. SAMPLE rate adjust</li> <li>7. KEY /CPU parallel mode select</li> <li>9. LED enable/disable</li> </ol>




# OTP VOICE TOOL LIST

TOOL BOARD	DESCRIPTION
	<ol style="list-style-type: none"> <li>1. Part no. : <b>aP89XS_DB24D</b></li> <li>2. Demo Board for aP89341/aP89170/aP89085 DIP ( <b>DAC - 24 PIN DEMO BOARD</b> )</li> <li>3. PCB SIZE : 33 x 28 mm</li> <li>4. VCC = 3V</li> <li>5. Only <b>DAC</b></li> <li>6. SBT PIN PLAY</li> </ol>
	<ol style="list-style-type: none"> <li>1. Part no. : <b>aP89XS_DB24P</b></li> <li>2. Demo Board for aP89341/aP89170/aP89085 DIP ( <b>PWM - 24 PIN DEMO BOARD</b> )</li> <li>3. PCB SIZE : 33 x 28 mm</li> <li>4. VCC = 3V</li> <li>5. Only <b>PWM</b></li> <li>6. SBT PIN PLAY</li> </ol>
	<ol style="list-style-type: none"> <li>1. Part no. : <b>aP89XS_DB20P</b></li> <li>2. Demo Board for aP89042/aP89021/aP89010 DIP ( <b>PWM - 20 PIN DEMO BOARD</b> )</li> <li>3. PCB SIZE : 36 x 24 mm</li> <li>4. VCC = 3V</li> <li>5. Only <b>PWM</b></li> <li>6. SBT PIN PLAY</li> </ol>
	<ol style="list-style-type: none"> <li>1. Part no. : <b>aP89XS_DB20A</b></li> <li>2. Demo Board for aP8942A/aP8921A/aP8910A DIP ( <b>20 PIN DEMO BOARD</b> )</li> <li>3. PCB SIZE : 36 x 22 mm</li> <li>4. VCC = 4.5V</li> <li>5. <b>PWM &amp; DAC</b></li> <li>6. SBT PIN PLAY</li> </ol>


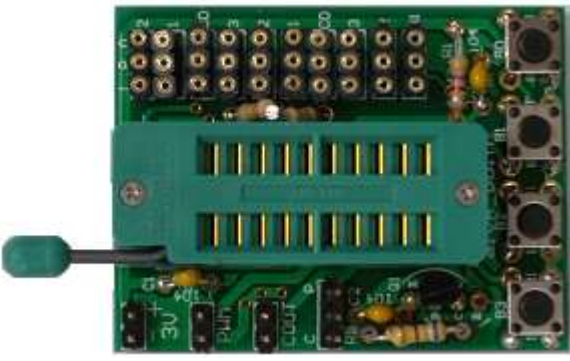


# OTP VOICE TOOL LIST

TOOL BOARD	DESCRIPTION
	<ol style="list-style-type: none"> <li>1. Part no. : <b>28S-24D</b> SOKET-28PIN(300MIL) for aP89341/170/085 SOP</li> <li>2. PCB size : 28x34mm</li> </ol>
	<ol style="list-style-type: none"> <li>1. Part no. : <b>20S-D</b> SOKET-20PIN(300MIL) For aP89042/42A、IVR8511/341N SOP</li> <li>2. PCB size : 27x32mm</li> </ol>
	<ol style="list-style-type: none"> <li>1. Part no. : <b>16S-D2</b> SOKET-16PIN(150MIL) For aP89021/010/21A/10A、 IVR1004B/2104B/4208 SOP</li> <li>2. PCB size : 26x22mm</li> </ol>
	<ol style="list-style-type: none"> <li>1. Part no. : <b>TEXTTOOL-16</b> SOCKET For aIVR1004B-8DIP</li> <li>2. PCB size : 36x22mm</li> </ol>

# OTP VOICE TOOL LIST





TOOL BOARD	DESCRIPTION
	<ol style="list-style-type: none"> <li>1. PART NO. : <b>aIVR20W</b></li> <li>2. Writer For aIVR1004/2104/4208/8511/341N DIP</li> <li>3. PCB SIZE : 135 x 117 mm</li> <li>4. POWER : <b>USB 5V</b></li> <li>5. Attachment : USB cable,&amp; CD( software ) &amp; user manual</li> </ol>
	<ol style="list-style-type: none"> <li>1. PART NO. : <b>aIVR20C8-DIP</b></li> <li>2. Copier For <b>aIVR1004/2104/4208/8511/341N</b></li> <li>3. PCB SIZE : 241 x 146 mm</li> <li>4. POWER : <b>DC-JACK 5V / 1A</b></li> <li>5. Attachment : Adapter 5V/1A</li> </ol>
	<ol style="list-style-type: none"> <li>1. PART NO. : <b>aIVR20C8-SOP16</b> <b>aIVR20C8-SOP20</b> <b>aIVR20C8-SOP24</b></li> <li>2. Copier For <b>aIVR1004/2104/4208 SOP</b> <b>aIVR8511/341N 20SOP</b> <b>aIVR341N 24SOP</b></li> <li>3. PCB SIZE : 241 x 146 mm</li> <li>4. POWER : <b>DC-JACK 5V / 1A</b></li> <li>5. Attachment : Adapter 5V/1A</li> </ol>

# OTP VOICE TOOL LIST




TOOL BOARD	DESCRIPTION
	<ol style="list-style-type: none"> <li>1. Part no. : <b>341NDBS</b></li> <li>2. Demo Board for aIVR341N DIP PCB SIZE : 40 x 25 mm</li> <li>3. VCC = 3V</li> <li>4. Only PWM</li> <li>5. SBT PIN PLAY</li> </ol>
	<ol style="list-style-type: none"> <li>1. Part no. : <b>aIVRDBT</b></li> <li>2. Demo Board for aIVR8511 DIP</li> <li>3. PCB SIZE : 47 x 35 mm</li> <li>4. VCC = 3.0V</li> <li>5. DAC / PWM select</li> </ol>
	<ol style="list-style-type: none"> <li>2. Part no. : <b>aIVRDBS</b></li> <li>3. Demo Board for aIVR8511/4208/2104/1004 DIP ( <b>PWM - 20 PIN DEMO BOARD</b> )</li> <li>3. PCB SIZE : 47 x 35 mm</li> <li>4. VCC = 3V</li> <li>5. Only PWM</li> </ol>
	<ol style="list-style-type: none"> <li>1. Part No. : <b>aIVR_DB16</b></li> <li>2. Demo Board for aIVR1004/aIVR2104/aIVR4208 DIP</li> <li>3. PCB SIZE : 68 x 63 mm</li> <li>4. VCC = 3.0V</li> </ol>



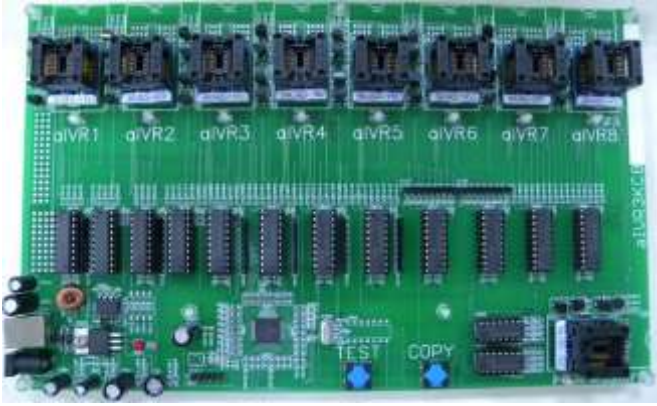


# OTP VOICE TOOL LIST

TOOL BOARD	DESCRIPTION
	<p>1. Part no. : <b>24S-24D</b></p> <p>SOKET-24PIN(300MIL) for AIVR341N SOP</p> <p>2. PCB size : 23x30mm</p>
	<p>1. Part no. : <b>20S-D</b></p> <p>SOKET-20PIN(300MIL) For aP89042/42A 、 aIVR8511/341N SOP</p> <p>2. PCB size : 27x32mm</p>
	<p>1. Part no. : <b>16S-D2</b></p> <p>SOKET-16PIN(150MIL) For aP89021/010/21A/10A 、 aIVR1004B/2104B/4208 SOP</p> <p>2. PCB size : 26x22mm</p>
	



# OTP VOICE TOOL LIST

TOOL BOARD	DESCRIPTION
	<ol style="list-style-type: none"> <li>1. PART NO. : <b>aIVR3KWS</b></li> <li>2. Writer For aIVR3K10/21/42 DIP</li> <li>3. PCB SIZE : 79 x 83 mm</li> <li>4. POWER : <b>USB 5V</b></li> <li>5. Attachment : USB cable,&amp; CD( software )</li> </ol>
	<ol style="list-style-type: none"> <li>1. PART NO. : <b>aIVR3KC8-DIP</b></li> <li>2. Copier For aIVR3K10/21/42 DIP</li> <li>3. PCB SIZE : 241 x 146 mm</li> <li>4. POWER : <b>DC-JACK 5V / 1A</b></li> <li>5. Attachment : Adapter 5V/1A</li> </ol>
	<ol style="list-style-type: none"> <li>1. PART NO. : <b>aIVR3KC8-SOP8</b></li> <li>2. Copier For aIVR3K10/21/42 SOP</li> <li>3. PCB SIZE : 241 x 146 mm</li> <li>4. POWER : <b>DC-JACK 5V / 1A</b></li> <li>5. Attachment : Adapter 5V/1A</li> </ol>



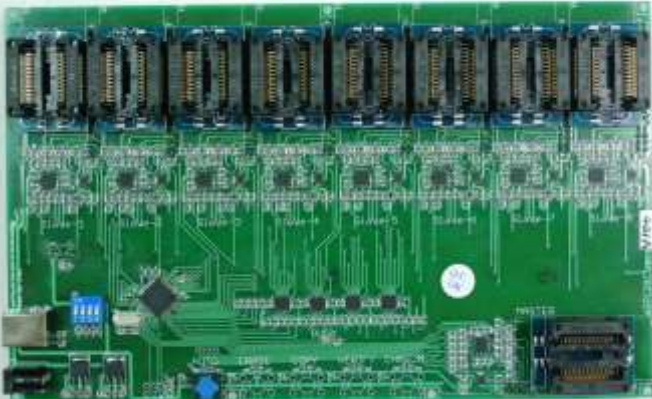
# OTP VOICE TOOL LIST

TOOL BOARD	DESCRIPTION
	<ol style="list-style-type: none"> <li>1. PART NO. : <b>aIVR3KC8-SOP14</b></li> <li>2. Copier For <b>aIVR3K42 SOP</b></li> <li>3. PCB SIZE : 241 x 146 mm</li> <li>4. POWER : <b>DC-JACK 5V / 1A</b></li> <li>5. Attachment : Adapter 5V/1A</li> </ol>
	<ol style="list-style-type: none"> <li>1. Part no. : <b>3KDBDN</b></li> <li>2. Demo Board for aIVR3K10/21/42 DIP</li> <li>3. PCB SIZE : 26 x 26 mm</li> <li>4. VCC = <b>3.0V</b></li> <li>5. DAC / PWM select</li> <li>6. SBT PIN PLAY</li> </ol>
	<ol style="list-style-type: none"> <li>1. Part no. : <b>3KDBDS</b></li> <li>2. Demo Board for aIVR3K10/21/42 DIP</li> <li>3. PCB SIZE : 8 x 16 mm</li> <li>4. VCC = <b>3.0V</b></li> <li>5. Only <b>PWM</b></li> </ol>


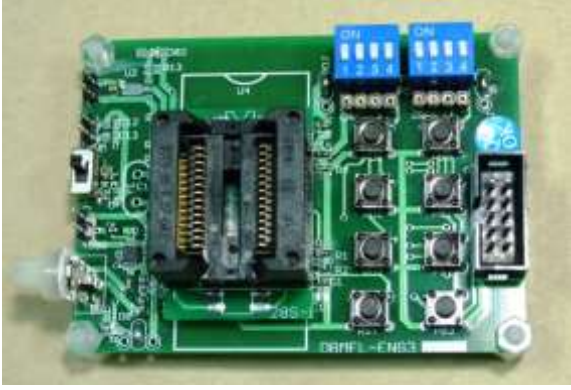

# OTP VOICE TOOL LIST

TOOL BOARD	DESCRIPTION
	<p>1. Part no. : <b>3K8S-16D</b></p> <p>SOKET-8PIN(150MIL) for aIVR3K10/21/42 SOP</p> <p>2. PCB size : 21 x 16 mm</p>
	<p>1. Part no. : <b>3K14S-16D</b></p> <p>SOKET-14PIN(150MIL) For aIVR3K42 SOP</p> <p>2. PCB size : 21 x 16 mm</p>





# OTP VOICE TOOL LIST

TOOL BOARD	DESCRIPTION
	<ol style="list-style-type: none"> <li>1. PART NO. : <b>aSPI28W</b></li> <li>2. Writer For aMTP32M</li> <li>3. PCB SIZE : 58 x 20 mm</li> <li>4. POWER : <b>USB 5V</b></li> <li>5. Attachment : USB cable,&amp; CD( software )</li> </ol>
	<ol style="list-style-type: none"> <li>1. PART NO. : <b>aSPI28C-DIP</b></li> <li>2. Copier For aMTP32M</li> <li>3. PCB SIZE : 231 x 140 mm</li> <li>4. POWER : <b>DC-JACK 5V / 1A</b></li> <li>5. Attachment : Adapter 5V/1A</li> </ol>
	<ol style="list-style-type: none"> <li>1. PART NO. : <b>aSPI28C-SOP</b></li> <li>2. Copier For aMTP32M</li> <li>3. PCB SIZE : 231 x 140 mm</li> <li>4. POWER : <b>DC-JACK 5V / 1A</b></li> <li>5. Attachment : Adapter 5V/1A</li> </ol>





# OTP VOICE TOOL LIST

TOOL BOARD	DESCRIPTION
	<ol style="list-style-type: none"> <li>1. Part no. : <b>DBMFL-ENG2-DIP</b></li> <li>2. Demo Board ( Programming board ) for aMTP32M DIP</li> <li>3. PCB SIZE : 75 x 53 mm</li> <li>4. VCC = <b>3.0V</b></li> <li>5. DAC(aP4890) / PWM select</li> </ol>
	<ol style="list-style-type: none"> <li>1. Part no. : <b>DBMFL-ENG2-SOP</b></li> <li>2. Demo Board ( Programming board ) for aMTP32M SOP</li> <li>3. PCB SIZE : 75 x 53 mm</li> <li>4. VCC = <b>3.0V</b></li> <li>5. DAC(aP4890) / PWM select</li> </ol>
	<ol style="list-style-type: none"> <li>1. Part no. : <b>DBMFL-STD2</b></li> <li>2. Demo Board for aMTP32M SOP</li> <li>3. PCB SIZE : 37 x 29 mm</li> <li>4. VCC = <b>3.0V</b></li> <li>5. DAC / PWM select</li> </ol>

# OTP VOICE TOOL LIST



TOOL BOARD	DESCRIPTION
	<ol style="list-style-type: none"> <li>1. Part no. : <b>aPR33A3DBS - C1.1</b></li> <li>2. Demo Board for aPR33A3 SOP CPU Serial mode</li> <li>3. PCB SIZE : 32 x 29 mm</li> <li>4. VCC = 3.0V~6.5V</li> <li>5. Only PWM</li> </ol>
	<ol style="list-style-type: none"> <li>1. Part no. : <b>aPR33A3DBS - E2.1</b></li> <li>2. Demo Board for APR33A3 SOP Fixed 1/2/4/8 message mode</li> <li>3. PCB SIZE : 32 x 29 mm</li> <li>4. VCC = 3.0V~6.5V</li> <li>5. Only PWM</li> </ol>
	<ol style="list-style-type: none"> <li>1. Part no. : <b>aPR33A3DBS-C3.1</b></li> <li>2. Demo Board for APR33A3 SOP Tape mode</li> <li>3. PCB SIZE : 32 x 29 mm</li> <li>4. VCC = 3.0V~6.5V</li> <li>5. Only PWM</li> </ol>
	<ol style="list-style-type: none"> <li>1. Part no. : <b>aPR33A3DBF-C1.1</b></li> <li>2. Demo Board for aPR33A3 SOP CPU Serial mode</li> <li>3. PCB SIZE : 32 x 29mm 59 x56mm</li> <li>4. VCC = 3.0~6.5V</li> <li>5. Only PWM</li> </ol>

# OTP VOICE TOOL LIST

TOOL BOARD	DESCRIPTION
	<ol style="list-style-type: none"> <li>1. Part no. : <b>aPR33A3DBF-E2.1</b></li> <li>2. Demo Board for aPR33A3 SOP Fixed 1/2/4/8 message mode</li> <li>3. PCB SIZE : 32 x 29mm 31 x 37mm</li> <li>4. VCC = 3.0~6.5V</li> <li>5. Only PWM</li> </ol>
	<ol style="list-style-type: none"> <li>1. Part no. : <b>aPR2060DBS-T2.2</b></li> <li>2. Demo Board for aPR2060 DIP Fixed 1/2/4 message mode</li> <li>3. PCB SIZE : 54 x 54mm</li> <li>4. VCC = 3.0-6.5V</li> <li>5. Only PWM.</li> </ol>
	<ol style="list-style-type: none"> <li>1. Part no. : <b>aPR2060DBS-K2.1</b></li> <li>2. Demo Board for aPR2060 DIP Fixed 1,2message mode + volume control</li> <li>3. PCB SIZE : 54 x 54mm</li> <li>4. VCC = 3.0-6.5V</li> <li>5. Only PWM</li> </ol>
	<ol style="list-style-type: none"> <li>1. Part no. : <b>aPR2060DBC-H2.2</b></li> <li>2. Demo Board for aPR2060 Dice Single message mode</li> <li>3. PCB SIZE : 34 x 22mm</li> <li>4. VCC = 3.0-6.5V</li> <li>5. Only PWM</li> </ol>



# OTP VOICE TOOL LIST

TOOL BOARD	DESCRIPTION
	<ol style="list-style-type: none"><li>1. Part no. : <b>Q WRITER</b></li><li>2. Writer for Q card</li><li>3. PCB SIZE : 64 x 54mm</li><li>4. VCC = 4.5-6V</li></ol>
	<ol style="list-style-type: none"><li>1. Part no. : <b>Q CARD</b></li><li>2. For aPR33A3 SOP Random 7 message mode</li><li>3. PCB SIZE : 43 x 35mm</li><li>4. VCC : 3-6.5V</li><li>5. Only PWM</li></ol>